

Horizontal Water Cooled Package

Models: MWH 011 B/BR
MWH 012 B/BR
MWH 015 B/BR
MWH 020 B/BR
MWH 025 B/BR
MWH 030 B/BR
MWH 040 B/BR
MWH 050 B/BR
MWH 060 B/BR
MWH 070 B/BR



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This manual supercedes MWH-B-2007

Note : Installation and maintenance are to be performed only by qualified personnel who are familiar with local codes and regulations, and experienced with this type of equipment.

Caution : Sharp edges and coil surfaces are a potential injury hazard. Avoid contact with them.

Warning : Moving machinery and electrical power hazard. May cause severe personnel injury or death. Disconnect and lock off power before servicing equipment.

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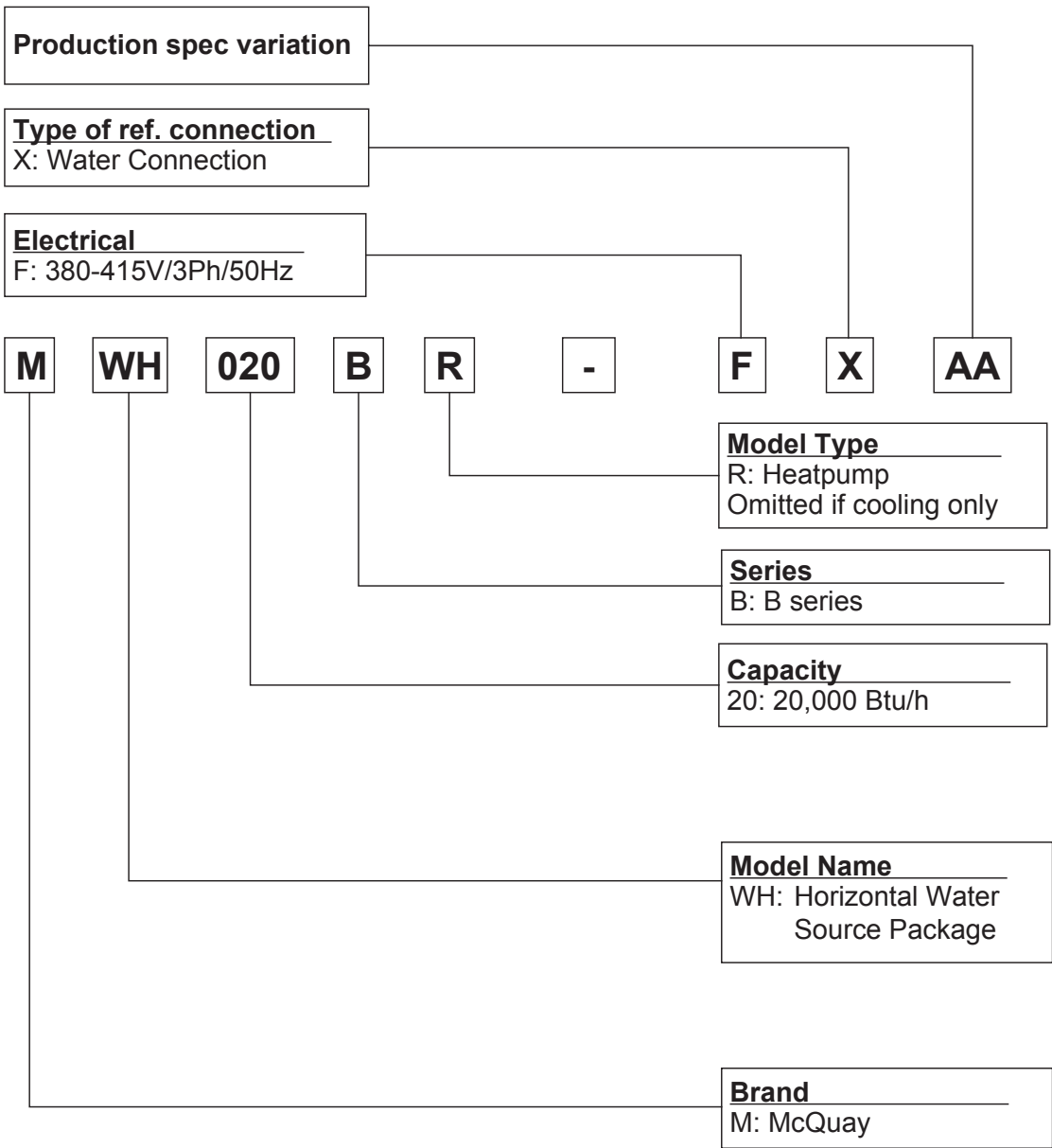
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Bulletin illustrations cover the general appearance of McQuay International products at the time of publication.

We reserve the right to change design and construction specifications at any time without notice.



Nomenclature



Product Line-up

Horizontal Water Source Package (R22)

WH		NOMENCLATURE	CLASSIFICATION											Compressor	
			Control		Handset		Marking	Fin	Control		Compressor	Piping			
			APM02D	APM01CB	SLM15A	APW04A (LCD)	W/out Marking	Hydrophilic (Corr.)	Cap. Tube	W/out Cap. Tube	Rotary	Right Hand Side	Left Hand Side		With Heater
Cooling Model	011B	FXAA		X	X		X	X	X		X	X			2PL164D2AA02
		FXAB		X	X		X	X	X		X	X		X	2PL164D2AA02
		FXAC		X		X	X	X	X		X	X			2PL164D2AA02
	012B	FXAA		X	X		X	X	X		X	X			2PS164D2AH02
		FXAB		X	X		X	X	X		X	X		X	2PS164D2AH02
		FXAC		X		X	X	X	X		X	X			2PS164D2AH02
		FXAD		X		X	X	X	X		X	X		X	2PS164D2AH02
		FXLA		X	X		X	X	X		X		X		2PS164D2AH02
		FXLB		X	X		X	X	X		X		X	X	2PS164D2AH02
		FXLC		X		X	X	X	X		X		X		2PS164D2AH02
		FXLD		X		X	X	X	X		X		X	X	2PS164D2AH02
	015B	FXAA		X	X		X	X	X		X	X			2KS224D5BE02
		FXAB		X	X		X	X	X		X	X		X	2KS224D5BE02
		FXAC		X		X	X	X	X		X	X			2KS224D5BE02
		FXAD		X		X	X	X	X		X	X		X	2KS224D5BE02
		FXLA		X	X		X	X	X		X		X		2KS224D5BE02
		FXLB		X	X		X	X	X		X		X	X	2KS224D5BE02
		FXLC		X		X	X	X	X		X		X		2KS224D5BE02
		FXLD		X		X	X	X	X		X		X	X	2KS224D5BE02
	020B	FXAA		X	X		X	X	X		X	X			2KS282D5CA02
		FXAB		X	X		X	X	X		X	X		X	2KS282D5CA02
		FXAC		X		X	X	X	X		X	X			2KS282D5CA02
		FXAD		X		X	X	X	X		X	X		X	2KS282D5CA02
		FXLA		X	X		X	X	X		X		X		2KS282D5CA02
		FXLB		X	X		X	X	X		X		X	X	2KS282D5CA02
		FXLC		X		X	X	X	X		X		X		2KS282D5CA02
		FXLD		X		X	X	X	X		X		X	X	2KS282D5CA02
	025B	FXAA	X		X		X	X	X		X	X			2PS192DAD02
		FXAB	X		X		X	X	X		X	X		X	2PS192DAD02
		FXAC	X			X	X	X	X		X	X			2PS192DAD02
		FXAD	X			X	X	X	X		X	X		X	2PS192DAD02
		FXLA	X		X		X	X	X		X		X		2PS192DAD02
		FXLB	X		X		X	X	X		X		X	X	2PS192DAD02
		FXLC	X			X	X	X	X		X		X		2PS192DAD02
		FXLD	X			X	X	X	X		X		X	X	2PS192DAD02

Horizontal Water Source Package (R22)

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Heat Pump Model	011BR	FXAA		X	X		X	X	X		X	X			2PL164D2AA02
		FXAB		X	X		X	X	X		X	X		X	2PL164D2AA02
		FXAC		X		X	X	X	X		X	X			2PL164D2AA02
	012BR	FXAA		X	X		X	X	X		X	X			2PS164D2AH02
		FXAB		X	X		X	X	X		X	X		X	2PS164D2AH02
		FXAC		X		X	X	X	X		X	X			2PS164D2AH02
		FXLA		X	X		X	X	X		X		X		2PS164D2AH02
		FXLC		X		X	X	X	X		X		X		2PS164D2AH02
	015BR	FXAA		X	X		X	X	X		X	X			2KS224D5BE02
		FXAB		X	X		X	X	X		X	X		X	2KS224D5BE02
		FXAC		X		X	X	X	X		X	X			2KS224D5BE02
		FXLA		X	X		X	X	X		X		X		2KS224D5BE02
		FXLC		X		X	X	X	X		X		X		2KS224D5BE02
	020BR	FXAA		X	X		X	X	X		X	X			2KS282D5CA02
		FXAB		X	X		X	X	X		X	X		X	2KS282D5CA02
		FXAC		X		X	X	X	X		X	X			2KS282D5CA02
		FXLA		X	X		X	X	X		X		X		2KS282D5CA02
		FXLC		X		X	X	X	X		X		X		2KS282D5CA02
	025BR	FXAA	X		X		X	X	X		X	X			2PS192DAD02
		FXAB	X		X		X	X	X		X	X		X	2PS192DAD02
		FXAC	X			X	X	X	X		X	X			2PS192DAD02
		FXLA	X		X		X	X	X		X		X		2PS192DAD02
		FXLC	X			X	X	X	X		X		X		2PS192DAD02

Features

High Energy Efficiency Rating

The McQuay MWH series of water source heat pumps have energy efficiency ratings as high as 16 and provide better energy consumption than that of most conventional air-cooled systems.

Packaged Unit. Compact. Low Height Profile

The McQuay MWH series of horizontal water source heat pumps is a packaged unit consisting of compressor (2 off in MWH025 and above), coil, tube in tube heat exchanger, expansion device and forward curved centrifugal blower. All units in this series have a very low profile, from 250mm for the MWH011B/BR, which has a horizontal compressor, to the largest unit in the range at 500mm.

No Separate Outdoor Unit

The packaged design concept eliminates the need for a separate outdoor unit. Also, the tube in tube heat exchangers in the MWH range do not need a fan to transfer heat load, resulting in a much quieter environment for building occupants.

Double Isolation Panel, Less Vibration

Unlike other conventional designs, the MWH series of water source heat pumps apply a double insulation concept, where the compressor is mounted on an extra upper panel. Vibration generated by the compressor is absorbed twice to the rubber grommets, before it reaches the unit casing.

Extremely Quiet Design

No outdoor fan, double isolation panel for compressor, superior insulation and use of twin rotary compressors in models above MWH025B/BR all add up to a quieter design. Particularly in night set back mode.

Application Flexibility

The McQuay MWH B/BR series has a wide range of operational temperatures. This means the entering water temperatures can be adjusted from 13°C – 45°C for cooling and 10°C – 32°C for heating.

Safety Protection Devices

Several safety protection devices are integrated into the MWH B/BR range of heat pumps to monitor their operation as well as provide necessary protection for all standard operational functions.

Partial Loading Capability

For MWH025B/BR to MWH070B/BR, which are having two compressors in their system, the capacity loading of compressors are able to controlled at 50% or 100%.

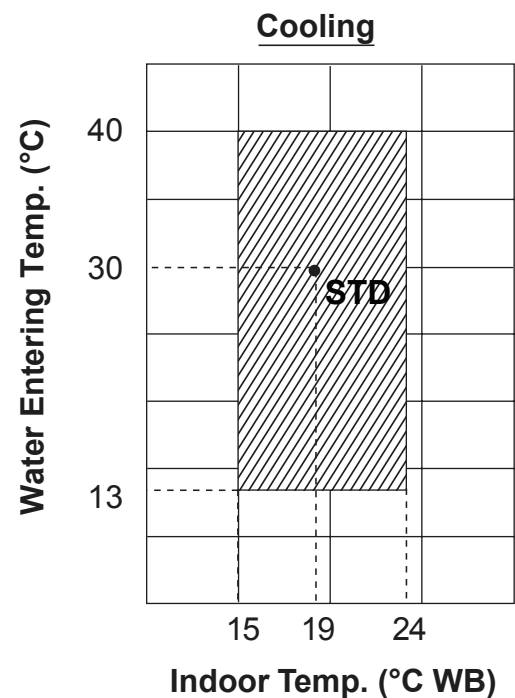
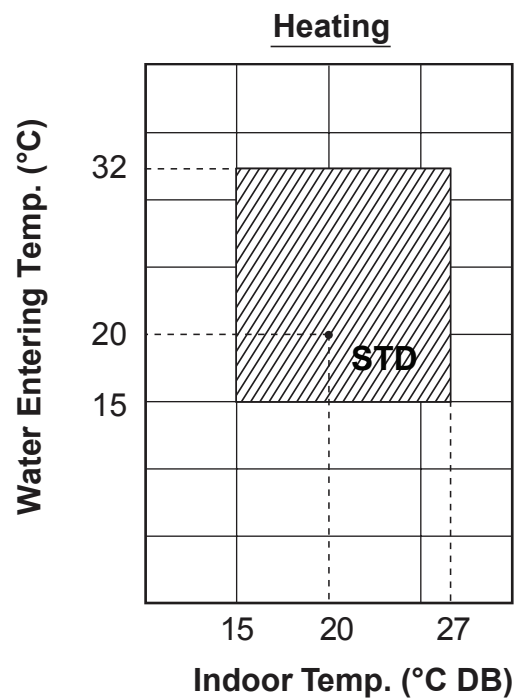
Sequencing Control

For the MWH025B/BR to MWH070B/BR, the compressors are able to operate in sequencing mode. This will allow both compressors to cut in and out according to their accumulative run times. This dramatically improves the compressor life and reliability.

Application Information

Operating Range

Ensure the operating temperature is in allowable range.

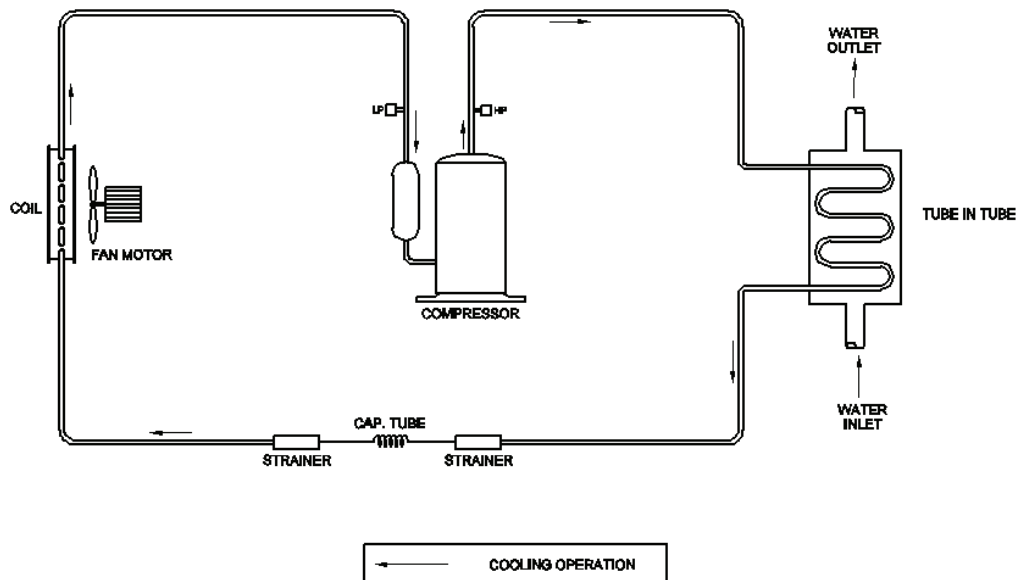


Delta T (Leaving Water Temperature - Entering Water Temperature) is only available for 5 °C.

Refrigerant Circuit Diagrams

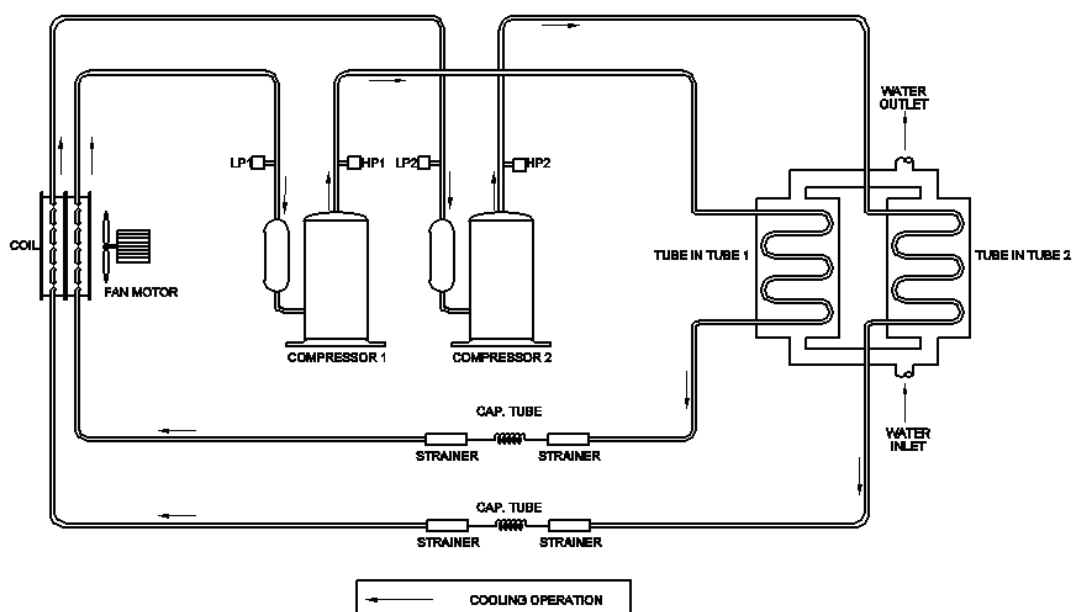
MWH 011/012/015/020 B

SCHEMATIC DIAGRAM



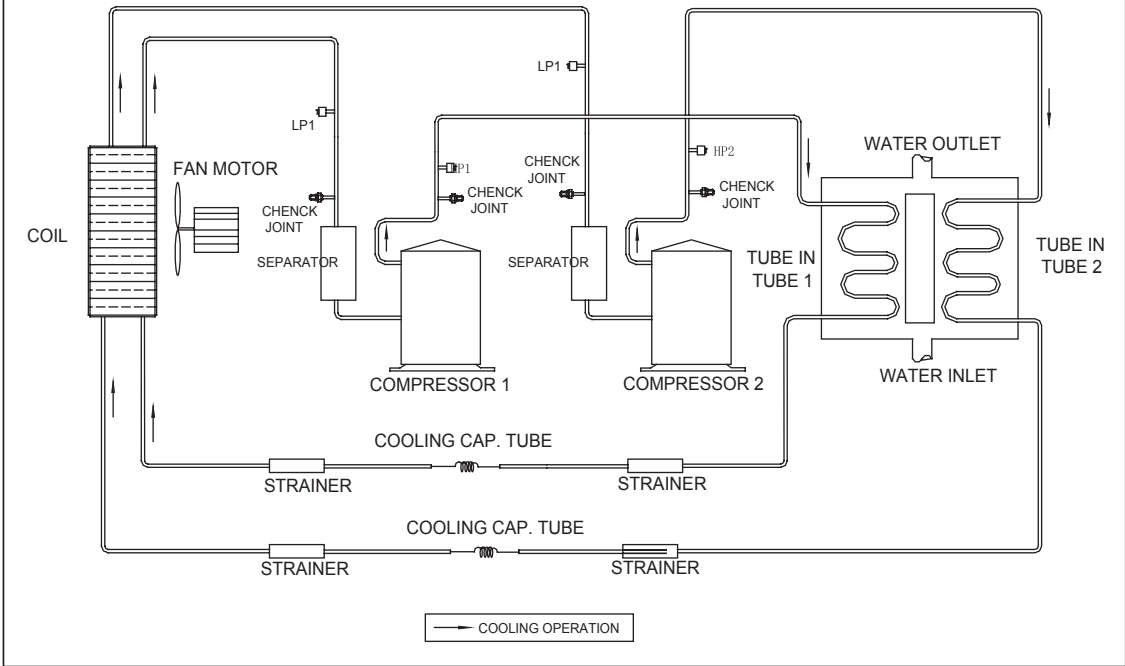
MWH 025 B

SCHEMATIC DIAGRAM



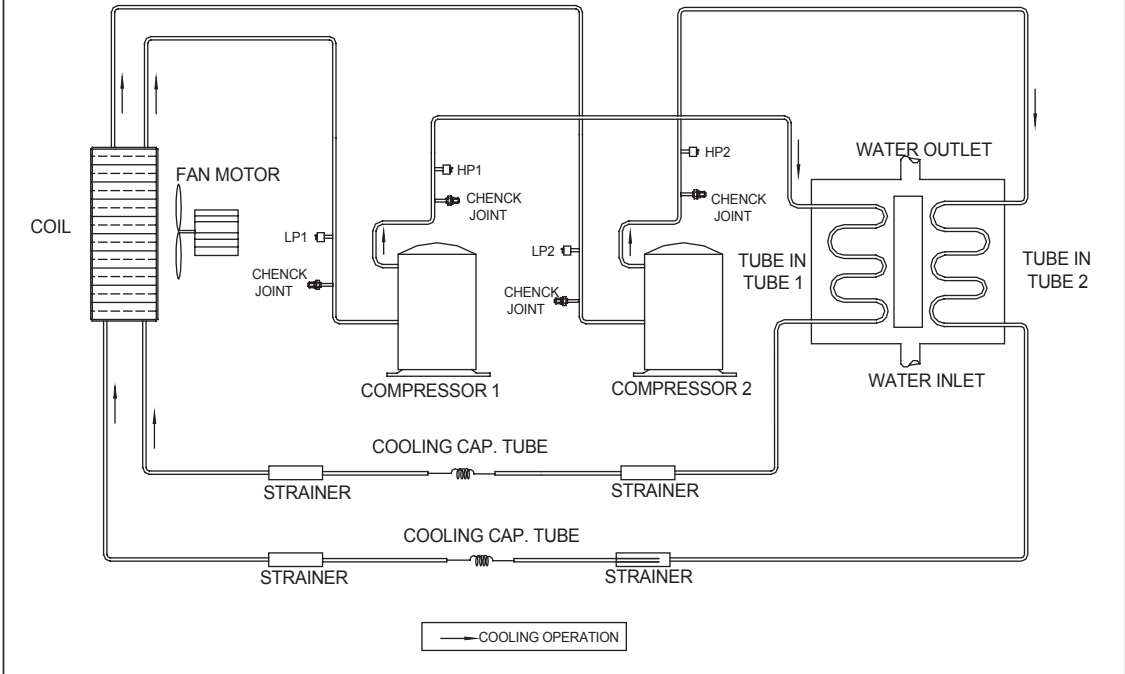
MWH 030/040/050 B

SCHEMATIC DIAGRAM



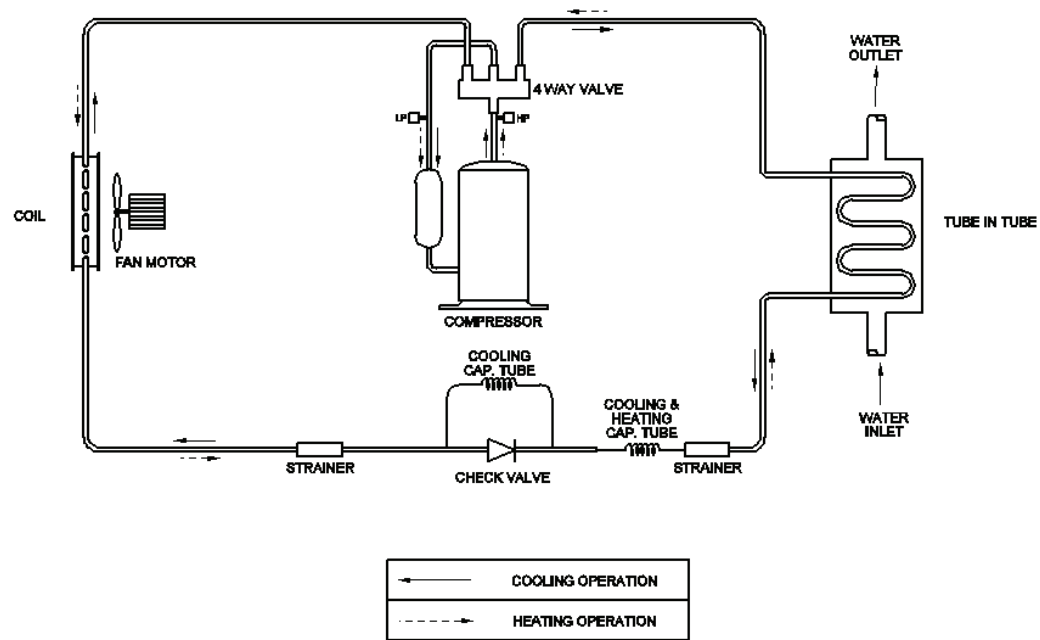
MWH 060/070 B

SCHEMATIC DIAGRAM



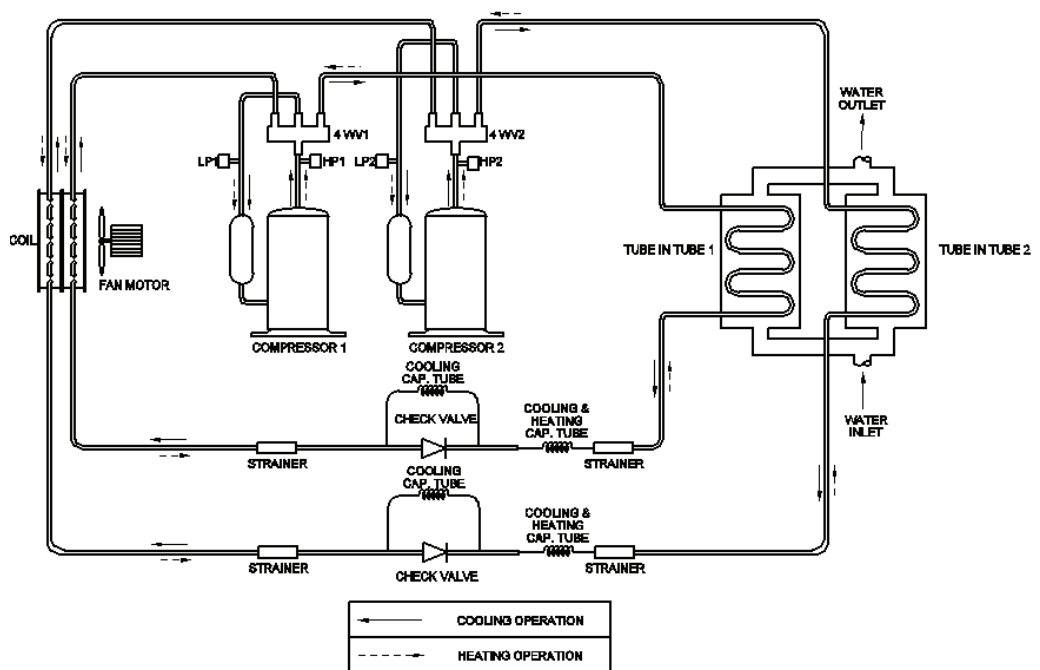
MWH 011/012/015/020 BR

SCHEMATIC DIAGRAM



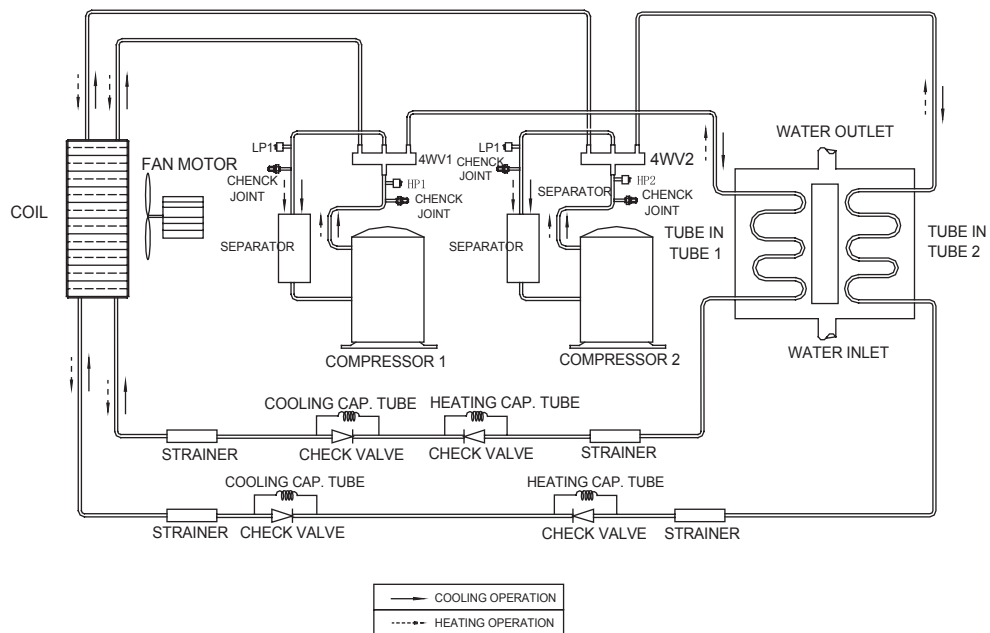
MWH 025 BR

SCHEMATIC DIAGRAM



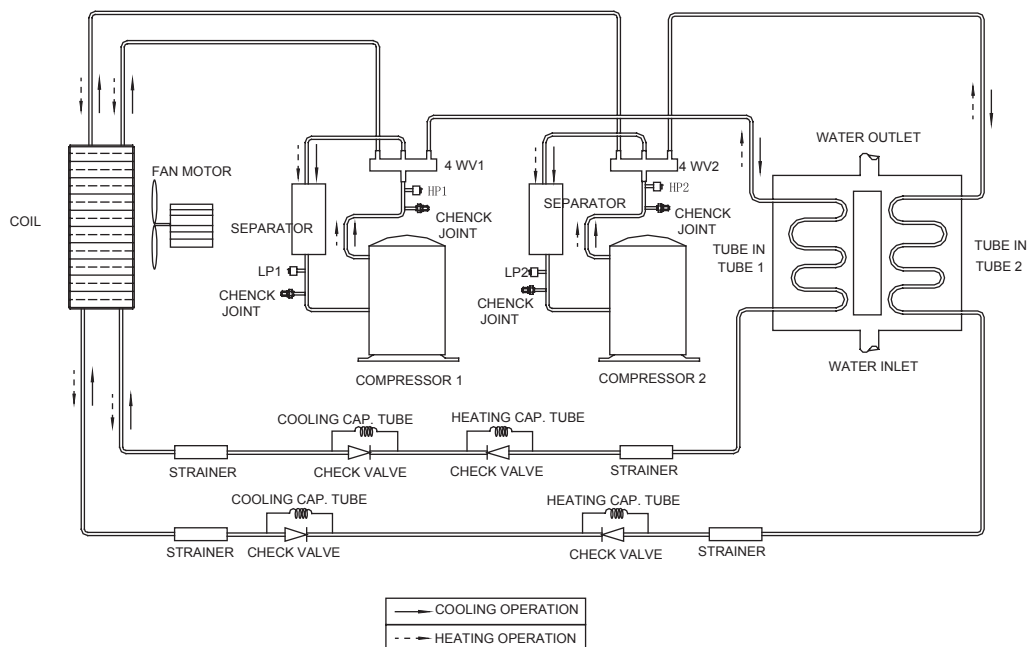
MWH 030/040/050 BR

SCHEMATIC DIAGRAM



MWH 060/070 BR

SCHEMATIC DIAGRAM



Controllers

APW04A

1. ON/OFF

Press to toggle the air conditioner unit between on and off status.

2. Power up default setting

Temperature : 25°C, Mode : Cool, Fan speed : High

3. Mode setting

Press MODE key will advance the mode in following sequence

Cool ---Dry---Fan---Heat---Auto

4. Fan speed

Press FAN key will advance the fan speed in following sequence

Auto---Low---Medium---High

Under fan mode, auto fan speed selection is inhibited. Under dry mode, fan speed is automatically controlled, fan speed selection is inhibited.

5. Temperature setting

Press ▲ or ▼ to increase or decrease the set temperature by 1°C with the range of 16°C to 30°C.

6. Real Time setting

Real time can be set through the operation panel.

Press CLOCK key, the set clock will be displayed on the LCD, press the HOUR, MIN and DAY to the real time. The time is 00:00 when power source is on, it will disappear when power source is off.

7. Timer setting

Press TIMER key, the week timer and timer on flash on the LCD, press HOUR, MIN and DAY to set the time when the air conditioner is required to be turned on.

Press TIMER key again, the week timer and timer on flash on the LCD, press HOUR, MIN and DAY to set the time when the air conditioner is required to be turned off.

8. Sleep mode

Sleep function will automatically adjust the set temperature to provide more comfortable setting and energy saving during sleep. Press SLEEP key to toggle sleep function, it is available in cool, heat and auto mode.

9. When the unit has fault, the controller will give alarm through sound and light for 2 seconds and the RUN LED flashes slowly and error code is displayed.

SLM15A

Heat Pump

1. "ON/OFF" button : Press to toggle the air conditioner unit between on and off status.
2. "MODE" button : Press to select operating mode, the operating modes are Cooling / Dry / Fan / Heating / Auto.
3. "FAN" button : Press to select fan speed in the following order, high - medium - low - auto.
4. "SLEEP" button : Press to select sleep mode. Press once to change in between Sleep Mode Activated or Sleep Mode Deactivated.
5. ▲ or ▼ button : Press to increase or decrease the set temperature by 1°C with the range of 16°C to 30°C.
6. "TIMER" button : Press to activate the timer function. When the unit is on, timer is set to off the unit or vise versa. Timer operating limit is 1 to 24 hours.

Controller Error Code

Model: MWH 011/012/015/020 B/BR

Error code	Description
E1	Water level switch error
E2	Compressor low pressure protection
E3	Compressor high pressure protection
E4	Return air sensor missing or damaged
E5	Indoor coil sensor missing or damaged
E6	Water outlet sensor missing or damaged
E7	Suction sensor missing or damaged
E8	Gas leak
E9	Coil temperature exceed 68°C
EA	Pump fault or water level fault
Eb	Temperature of water entering too high or low
Ec	Suction temperature too low

Model: MWH 025 B/BR

Error code	Description
E1	Water flow switch error
E2	Compressor 1 low pressure
E3	Compressor 1 high pressure
E4	Return air sensor missing or damaged
E5	Indoor coil 1 sensor missing or damaged
E6	Water outlet 1 sensor missing or damaged
E7	Suction temperature 1 missing or damaged
E8	Compressor 1 gas leak
EA	Water pump error
Eb	Temperature of water 1 entering too high or low
Ec	Suction temperature too low
EE	Communication error
F0	Water outlet 2 sensor missing or damaged
F1	Suction temperature 2 missing or damaged
F2	Compressor 2 low pressure
F3	Compressor 2 high pressure
F4	Compressor 2 gas leak
F5	Compressor 1 indoor coil frosting
F6	Compressor 2 indoor coil frosting
F7	Compressor 1 overload
F8	Compressor 2 overload
F9	Water level switch error
FA	Fan motor overload
Fb	Electric heater overload
Fd	Temperature of water 2 entering too high or low
FE	Ambient sensor missing or damaged
FF	Indoor coil 2 sensor missing or damaged

Controller Error Code

Model: MWH 030/040/050/060/070 B/BR

Error code	Description
E0	Indoor coil 1 sensor missing or damaged
E1	Indoor coil 2 sensor missing or damaged
E2	Return air sensor missing or damaged
E3	Water outlet 1 sensor missing or damaged
E4	Water outlet 2 sensor missing or damaged
E6	Suction 1 sensor missing or damaged
E7	Suction 2 sensor missing or damaged
Eb	Compressor 1 gas leak
Ec	Compressor 2 gas leak
Ed	Compressor 1 indoor coil frosting
EE	Network communication port error
Ef	Compressor 2 indoor coil frosting
F0	Water flow failure input contact
F1	Compressor 2 low pressure failure input contact
F2	Compressor 2 high pressure failure input contact
F3	Water flow failure input contact
F4	Compressor 2 overload failure input contact
F5	Compressor 1 overload failure input contact
F6	Fan overload failure input contact
F7	Water pump overload failure input contact
F8	Compressor 1 high pressure failure input contact
F9	Compressor 1 low pressure failure input contact
FA	Electric heater overload failure input contact
Fb	Entering water temperature 1 failure
Fd	Entering water temperature 2 failure
FE	Suction temperature too low

Precaution & Installation

Safety Precautions Before Installation

Before installing the air conditioner unit, please read the following safety precautions carefully.



WARNING

- Installation and maintenance should be performed by qualified persons who are familiar with local code and regulation, and experienced with this type of appliance.
 - All field wiring must be installed in accordance with the national wiring regulation.
 - Ensure that the rated voltage of the unit corresponds to that of the name plate before commencing wiring work
 - According to the wiring diagram.
 - The unit must be GROUNDED to prevent possible hazard due to insulation failure.
 - All electrical wiring must not touch the refrigerant piping, compressor and any moving parts of the fan motors.
 - Confirm that the unit has been switched OFF before installing or servicing the unit.
- Before installing the air conditioner unit, please read the following safety precautions carefully.



CAUTION

Please take note of the following important points when installing

- **Do not install the unit where leakage of flammable gas may occur**



If gas leaks and accumulates around the unit, it may cause fire ignition.

- **Confirm drainage piping is connected properly**



If the drainage piping is not connected perfectly, it may cause water leakage which will dampen the furniture.

- **Do not overcharge the unit**



This unit is factory pre-charged. Over charge will cause over current or damage to the compressor.

- **Ensure that the unit panel is closed after service or installation.**

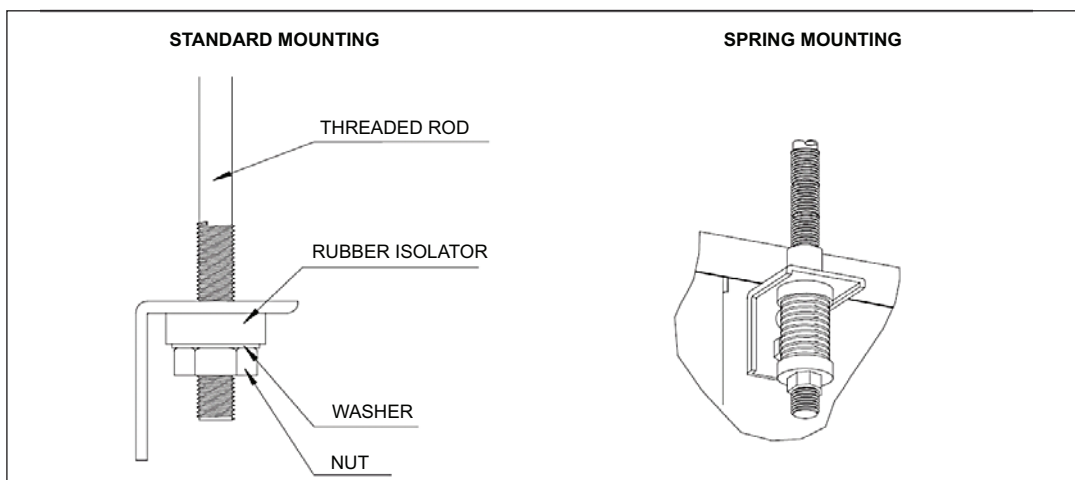
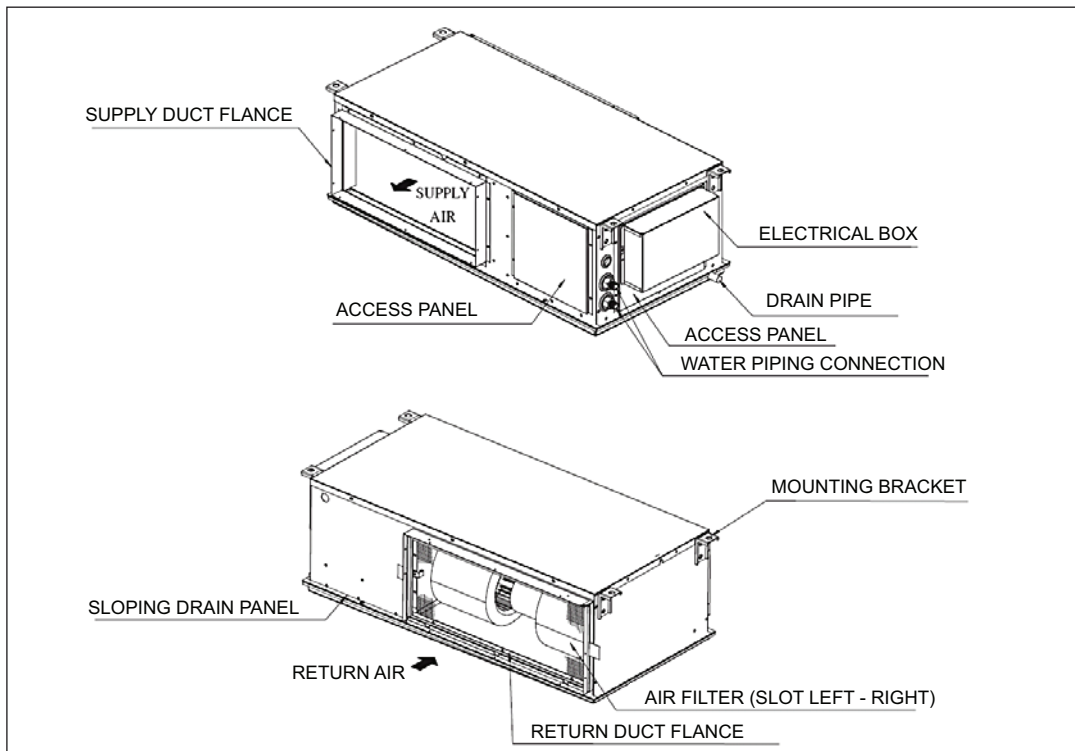


Unsecured panel will cause unit to operate noisily.

Installation

Location & Mounting

- This unit is designed for indoor installation only and for air supply ducted application. It is not recommended for non-ducted return air units to be installed at location where noise is critical.
- There should be sufficient working space for piping connection, service and maintenance.
- Allow sufficient space for filter removal for cleaning.
- The unit has a sloping drain panel for water drainage.
- This unit is suspended on the ceiling by the support of four mounting rods. Always use hanger bracket supplied.
- Make sure the mounting rods are able to withstand the unit weight and properly anchored to the ceiling.
- Use isolator rubbers for better noise and vibration control.
- It is recommended the unit be mounted with spring mounting kit supplied as an optional item. The system will be able to minimize the vibration and noise transmission to other area.

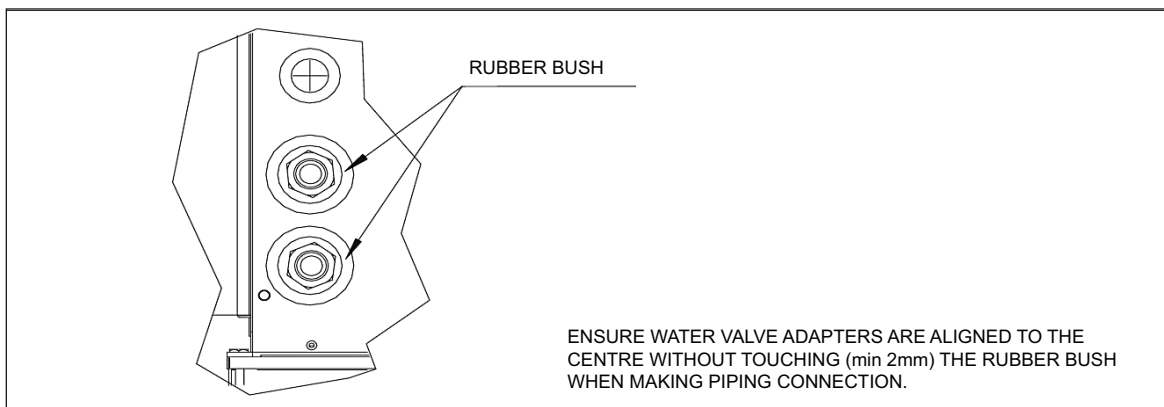
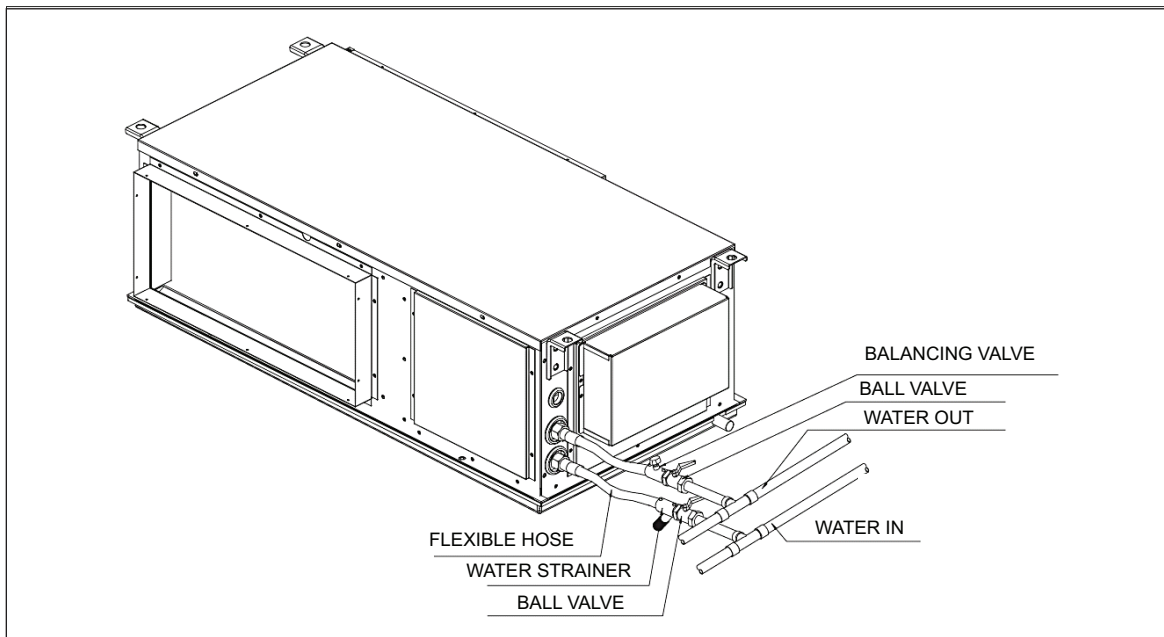


Supply & Return Duct

- Used good acoustic lined ducts.
- It is recommended that return air ducts are installed where noise is critical.
- Make sure a flexible duct is installed before connecting to other rigid duct system.
- Insulate the duct sufficiently with a good thermal heat insulation to prevent water condensation.
- Make sure all ducts are connected firmly to prevent air leakage. If any air leak occurs, the air flow rate will be reduced and performance of the unit will be affected as well.

Water Piping Connection

- It is a must to install 40 – 60 mesh water strainer to ensure water quality is good.
- Use water flexible hoses (optional items) for easy piping connection to the unit.
- The piping need to be cleaned and flushed prior to operation.
- In the event of water condensation on the piping, insulate the piping sufficiently.
- Air vents must be installed at the highest position to eliminate air bubble while a drainage system at the lowest position of the water circuit for water system flushing.
- Installation of water flow switch, pressure differential switch or other components which can protect the unit from operating when loss of water flow occurs is recommended.
- There is a 1/4" service port each at water inlet and outlet for connection to differential pressure switch if required.



Condensate Drain Connection

- Condensate drainage is to drain the condensate water out of the unit which to protect the unit from over-flowing.
- Make sure there is no blockage along the drain pipe connection.
- Pour water on the drain panel to check for water flowing out of the unit and there should be no water leaking.

Cleaning Systems Flushing

1. Prior to first operation of any conditioner, the water circulating system must be cleaned and flushed of all construction dirt and debris.

If the conditioners are equipped with water shut off valves, either electric or pressure operated, the supply and return run outs must be connected together at each conditioner location. This will prevent the introduction of dirt into the unit.

2. Fill the system at the city water makeup connection with all air vents open. After filling, close all air vents. The contractor should start main circulator with the pressure reducing valve open. Check vents in sequence to bleed off any trapped air, ensuring circulation through all components of the system. Power to the heat rejecter unit should be off, and the supplementary heat control set at 27°C.

While circulating water, the contractor should check and repair any leaks in the piping. Drain at the lowest point(s) in the system should be opened for initial flush and blow down, making sure city water fill valves are set to make up water at the same rate. Check the pressure gauge at pump suction and manually adjust the makeup to hold the same positive steady pressure both before and after opening the drain valves. Flush should continue for at least two hours, or longer if required, to see clear, clean drain water.

3. Shut off supplemental heater and circulator pump and open all drains and vents to completely drain down the system. Short circuited supply and return run outs should now be connected to the conditioner supply and return connections. Do not use sealers at the swivel flare connections of hoses.
4. Trisodium phosphate was formerly recommended as a cleaning agent during flushing. However, many states and localities ban the introduction of phosphates into their sewage systems. The current recommendation is to simply flush longer with warm 27°C water.
5. Refill the system with clean water. Test the water using litmus paper for acidity, and treat as required to leave the water slightly alkaline (PH 7.5 to 8.5). The specified percentage of antifreeze may also be added at this time. Use commercial grade antifreeze designed for HVAC systems only. Do not use automotive grade antifreeze.

Once the system has been filled with clean water and antifreeze (if used), precautions should be taken to protect the system from dirty water conditions. Dirty water will result in system wide degradation of performance and solids may clog valves, strainers, flow regulators, etc. Additionally, the heat exchanger may become clogged which reduces compressor service life or causes premature failure. A System Saver® from McQuay International should be employed to continuously remove solids as the system operates. Contact your local representative for further information on this device.

6. Set the loop water controller heat add set point to 21°C and the heat rejection set point to 29°C and supply power to all motors and start the circulating pumps. After full flow has been established through all components including the heat rejecter (regardless of season) and air vented and loop temperatures stabilized, each of the conditioners will be ready for check, test and start-up, air balancing, and water balancing.

Startup

Open all valves to full open position and turn on power to the conditioner .

1. Set mode to "Cool". Set the cooling temperature to the coolest position. Again, many conditioners have time delays which protect the compressor(s) against short cycling. After a few minutes of operation, check the discharge grilles for cool air delivery. Measure the temperature difference between entering and leaving water. It should be approximately 1 1/3 times greater than the heating mode temperature difference. For example, if the cooling temperature difference is 6°C, the heating temperature difference should have been 5°C.

Without automatic flow control valves, target a cooling temperature difference of 5°C to 8°C. Adjust the combination shut off/balancing valve in the return line to a water flow rate which will result in the 5°C to 8°C difference.

2. Set mode to "Heat". Set the heat setting to the warmest selection. Some conditioners have built-in time delays which prevent the compressor from immediately starting. With most control schemes, the fan will start immediately. After a few minutes of compressor operation, check for warm air delivery at discharge grille. If this is a "cold building" start-up, leave unit running until return air to the unit is at least 18°C. Measure the temperature difference between entering and leaving air and entering and leaving water. With entering water of 16°C to 27°C, leaving water should be 3.3°C to 6.6°C cooler, and the air temperature rise through the machine should not exceed 19°C. If the air temperature exceeds 19°C, then the water flow rate is inadequate.
3. Check the elevation and cleanliness of the condensate line. If the air is too dry for sufficient dehumidification, slowly pour enough water into the condensate pan to ensure proper drainage.
4. If the conditioner does not operate, check the following points:
 - a. Is supply voltage to the machine compatible?
 - b. Is thermostat type appropriate?
 - c. Is thermostat wiring correct?
5. If the conditioner operates but stops after a brief period:
 - a. Is there proper airflow? Check for dirty filter, incorrect ductwork.
 - b. Is there proper water flow rate within temperature limits? Check water balancing; back flush unit if dirt clogged.
6. Check for vibrating refrigerant piping, fan wheels, etc.
7. Do not lubricate the fan motor during the first year of operation as it is lubricated at the factory.

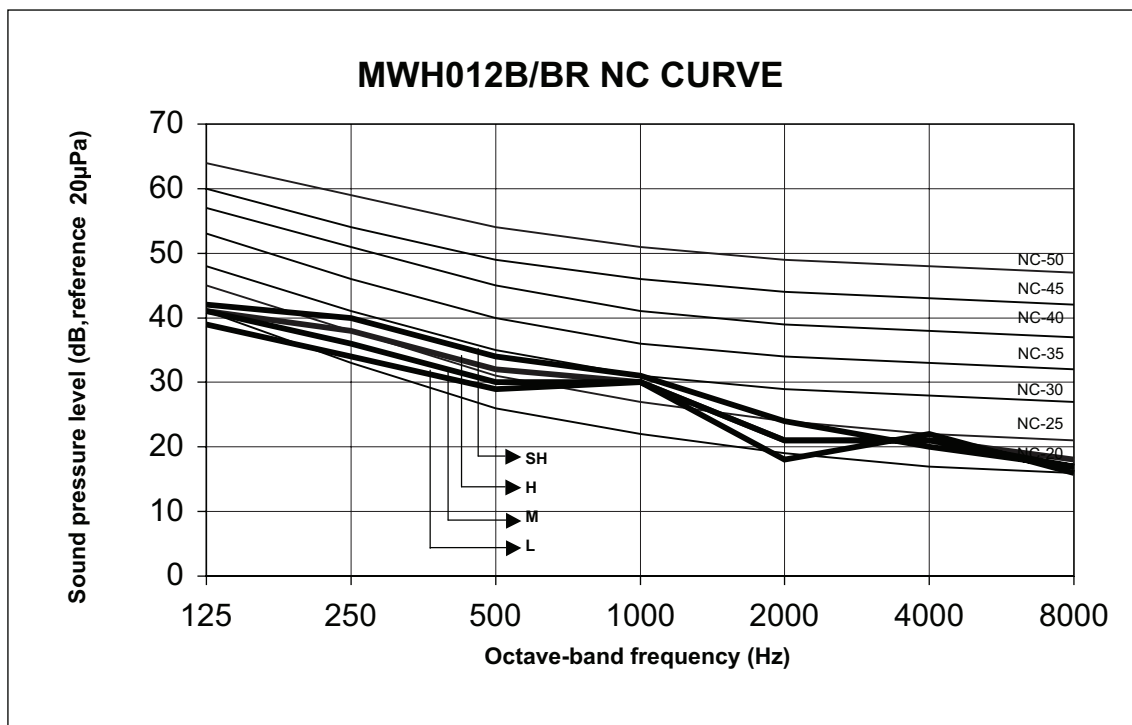
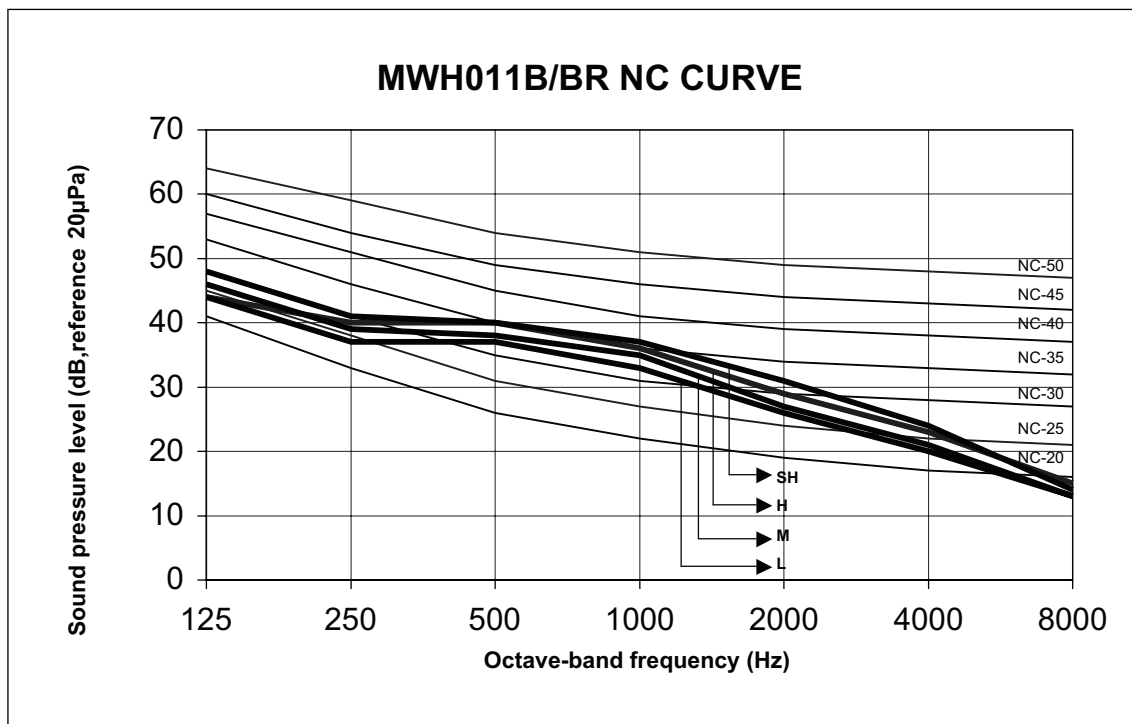
Sound Data

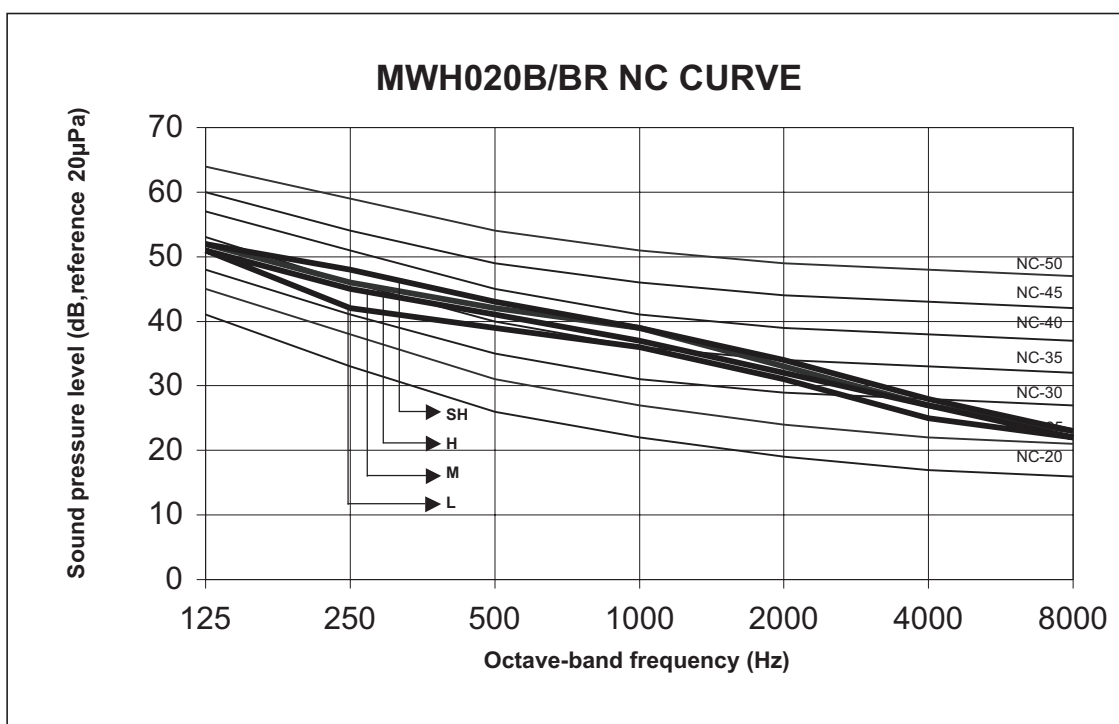
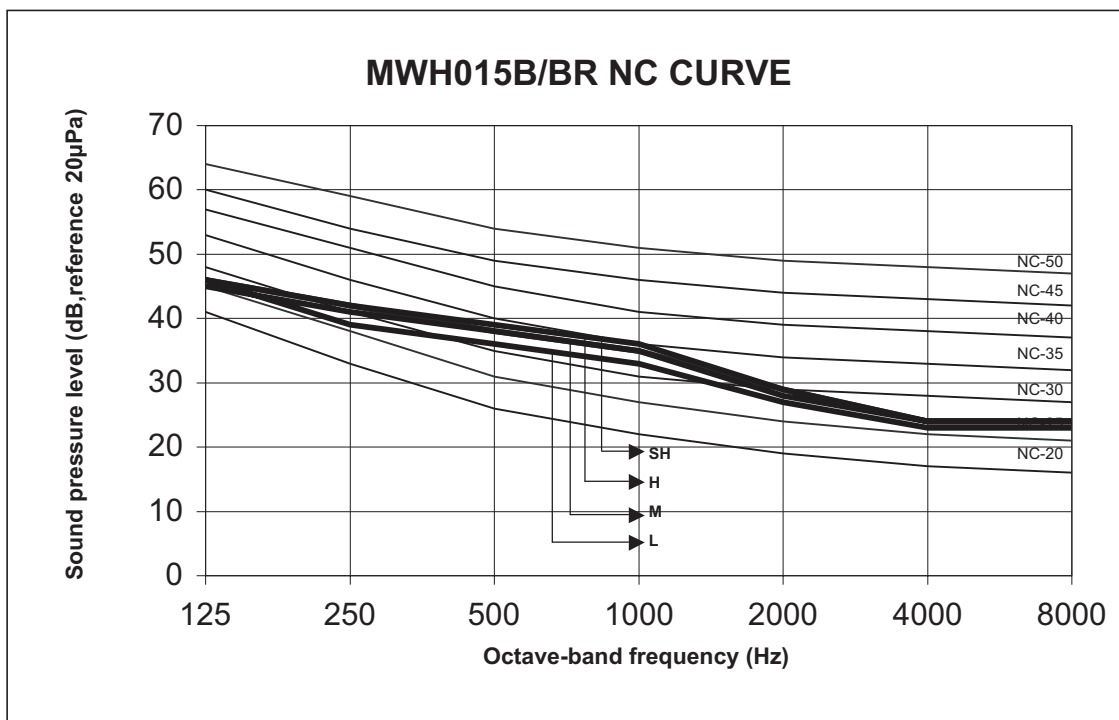
Sound Pressure Level (measured in anechoic room)

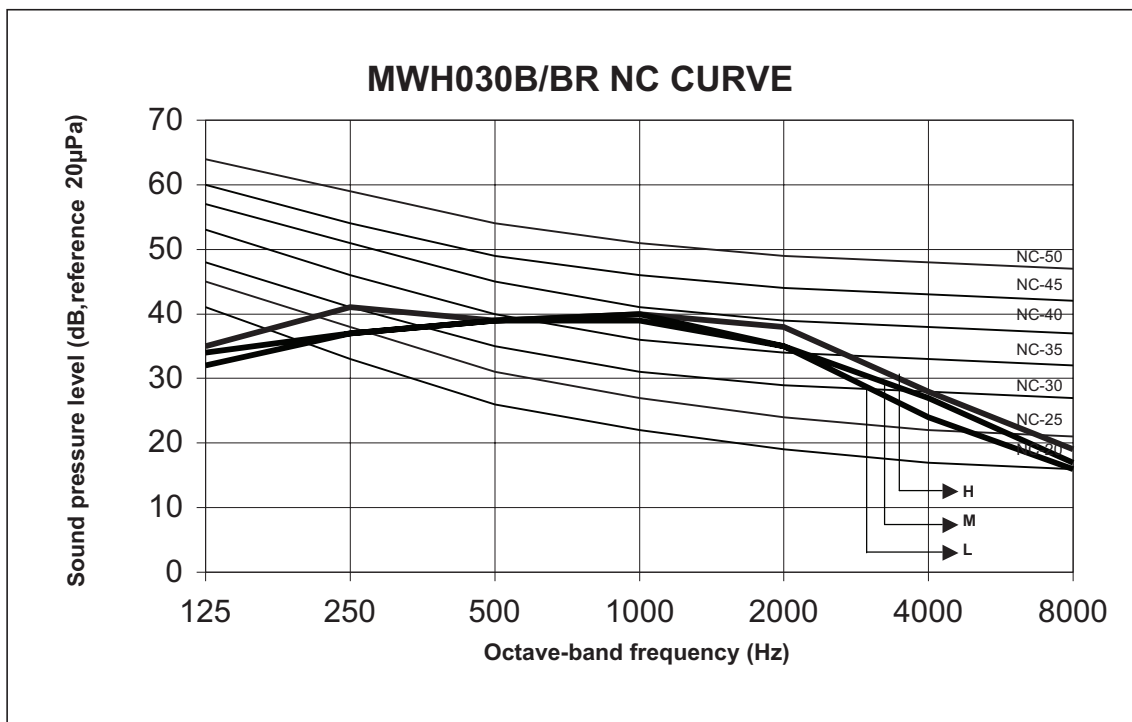
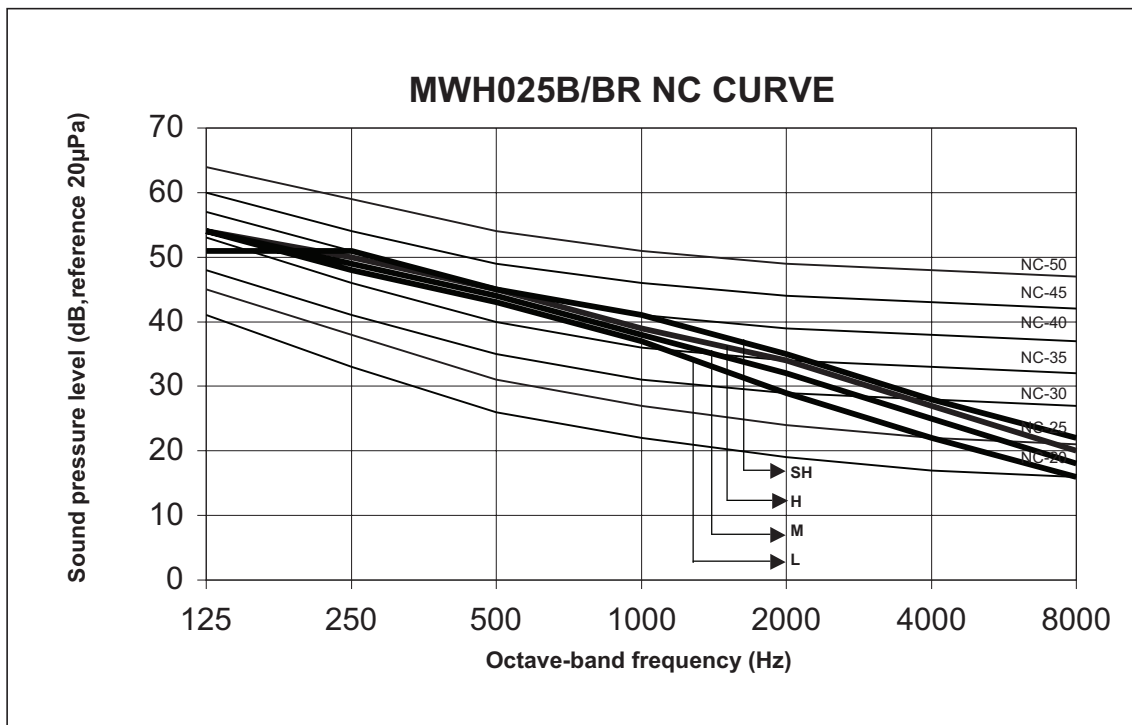
Model	Speed	1/1 Octave Sound Pressure Level(dB, ref 20μPa)							Overall (dBA)	Noise Criteria
		125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz		
MWH011B/BR	Super High	48	41	40	37	31	24	14	42	36
	High	44	40	40	36	29	23	15	41	35
	Medium	46	39	38	35	27	21	13	40	34
	Low	44	37	37	33	26	20	13	38	32
MWH012B/BR	Super High	42	40	34	31	24	20	17	37	30
	High	41	38	32	30	21	21	18	35	29
	Medium	41	36	30	30	21	21	17	34	29
	Low	39	34	29	30	18	22	16	33	29
MWH015B/BR	Super High	46	42	39	36	29	24	24	41	35
	High	46	42	38	35	29	24	24	40	34
	Medium	45	41	38	35	28	24	24	40	34
	Low	46	39	36	33	27	23	23	39	32
MWH020B/BR	Super High	52	48	43	39	34	28	23	45	38
	High	52	46	42	39	33	27	23	44	38
	Medium	51	45	41	37	32	27	22	43	36
	Low	51	42	39	36	31	25	22	41	35
MWH025B/BR	Super High	51	51	45	41	35	28	22	47	40
	High	54	50	45	39	34	27	20	47	40
	Medium	54	49	44	38	32	25	18	46	39
	Low	54	48	43	37	29	22	16	44	38
MWH030B/BR	High	35	41	39	40	38	28	19	51	39
	Medium	34	37	39	40	35	27	17	49	39
	Low	32	37	39	39	35	24	16	48	38
MWH040B/BR	High	44	39	42	40	40	37	30	54	41
	Medium	42	38	40	39	39	36	28	52	40
	Low	40	37	40	38	37	34	25	51	38
MWH050B/BR	High	42	39	44	42	40	37	30	53	41
	Medium	40	38	44	40	39	35	29	52	40
	Low	40	36	42	39	38	33	27	51	39
MWH060B/BR	High	42	42	44	43	37	32	22	56	42
	Medium	42	41	43	42	37	31	21	55	41
	Low	41	40	43	42	35	30	20	54	41
MWH070B/BR	High	35	38	44	44	38	28	19	53	43
	Medium	35	38	44	43	37	28	17	53	42
	Low	34	36	42	42	33	22	14	51	41

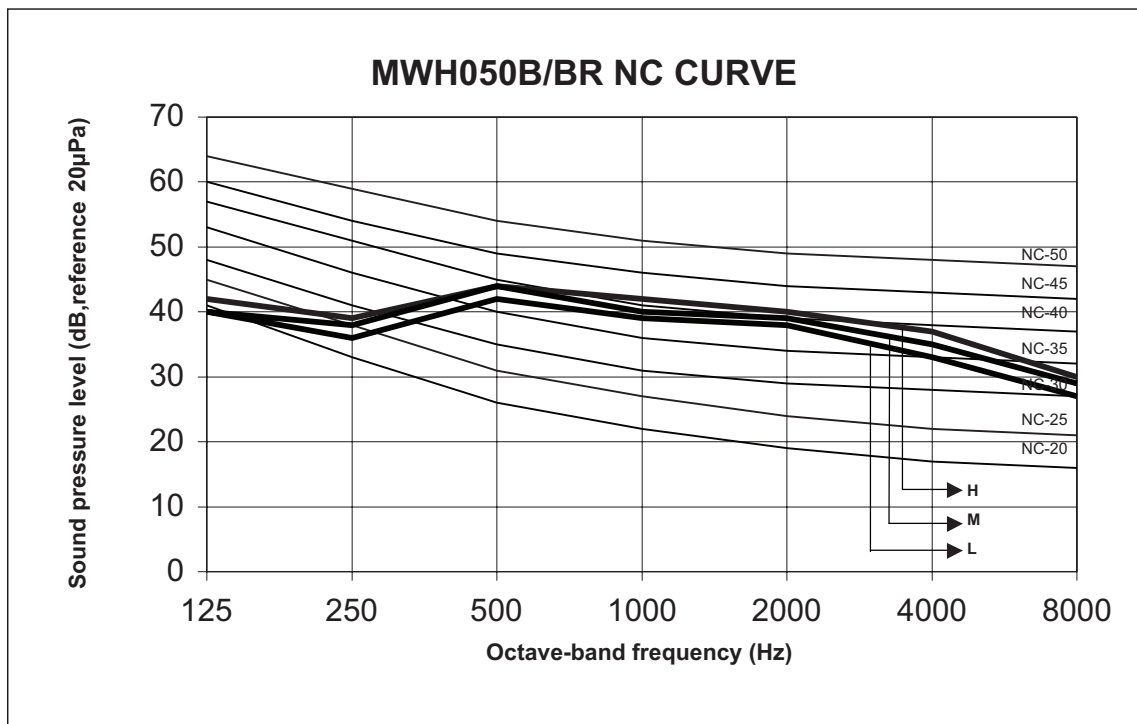
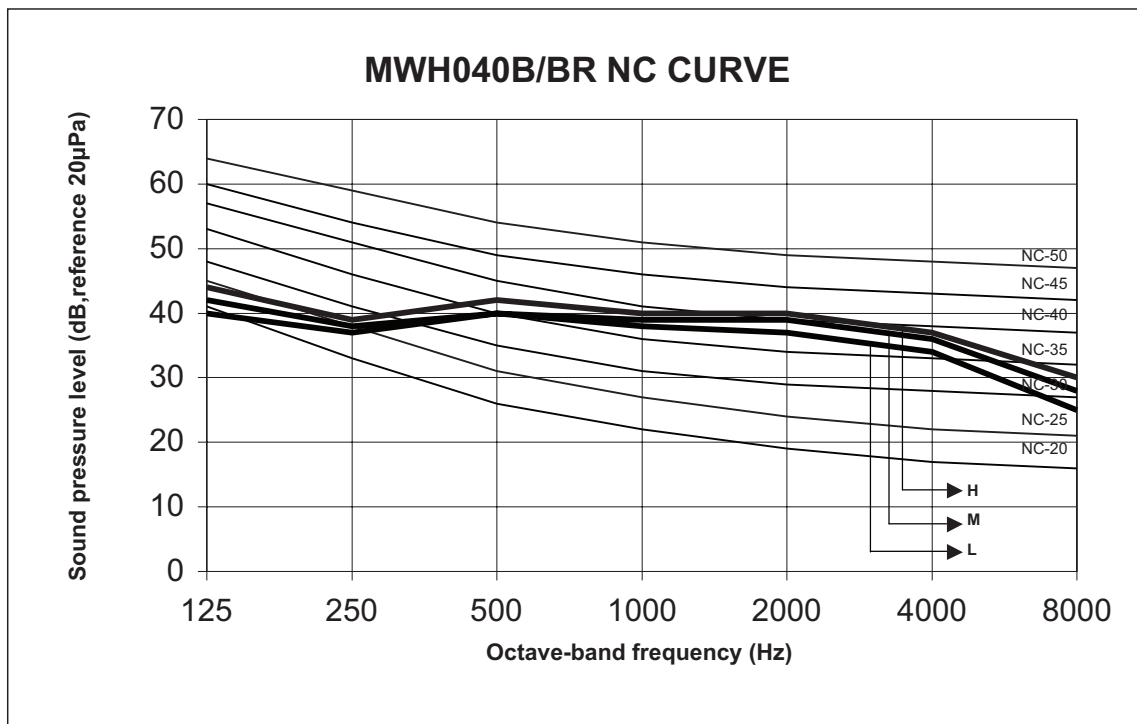
Microphone position:

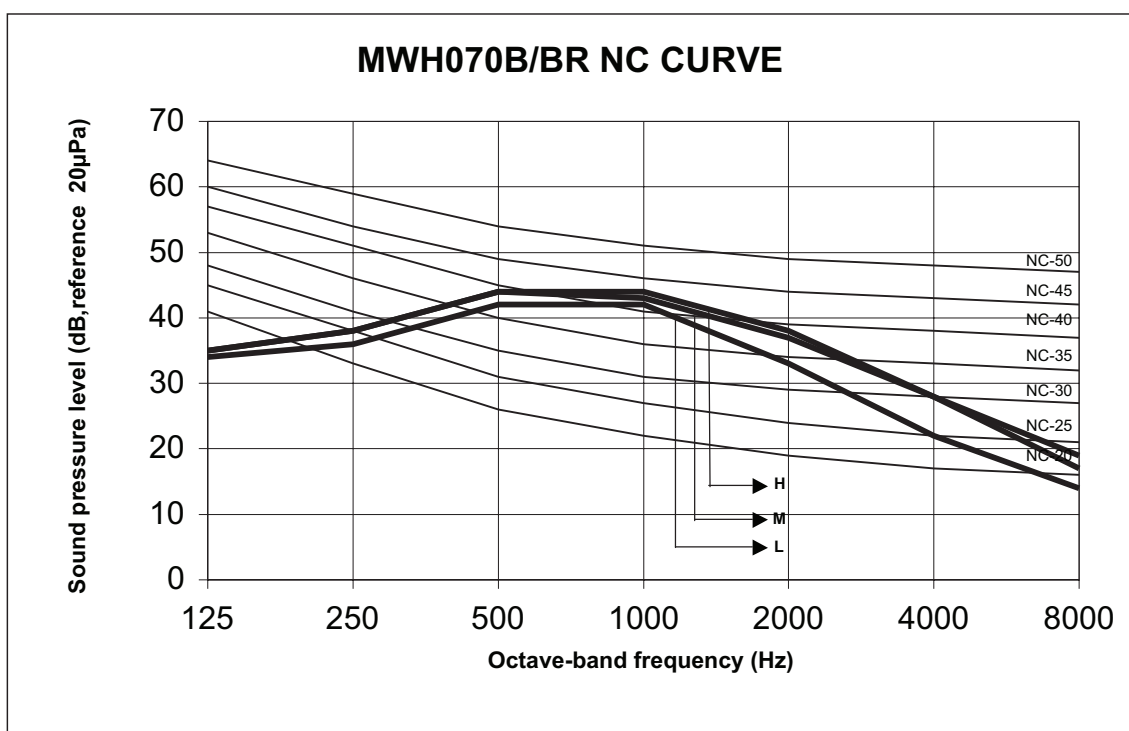
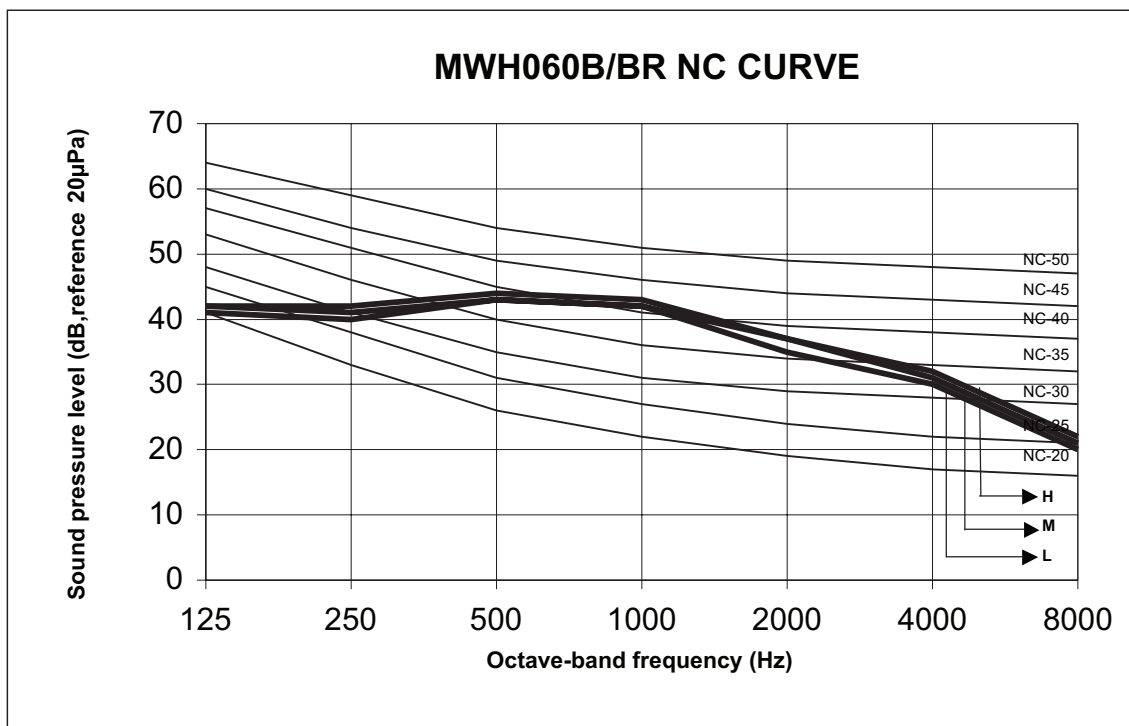
1.5m below the centre of the unit. (Tested with 2m length duct at the air discharge outlet and 1m duct at the air return inlet)





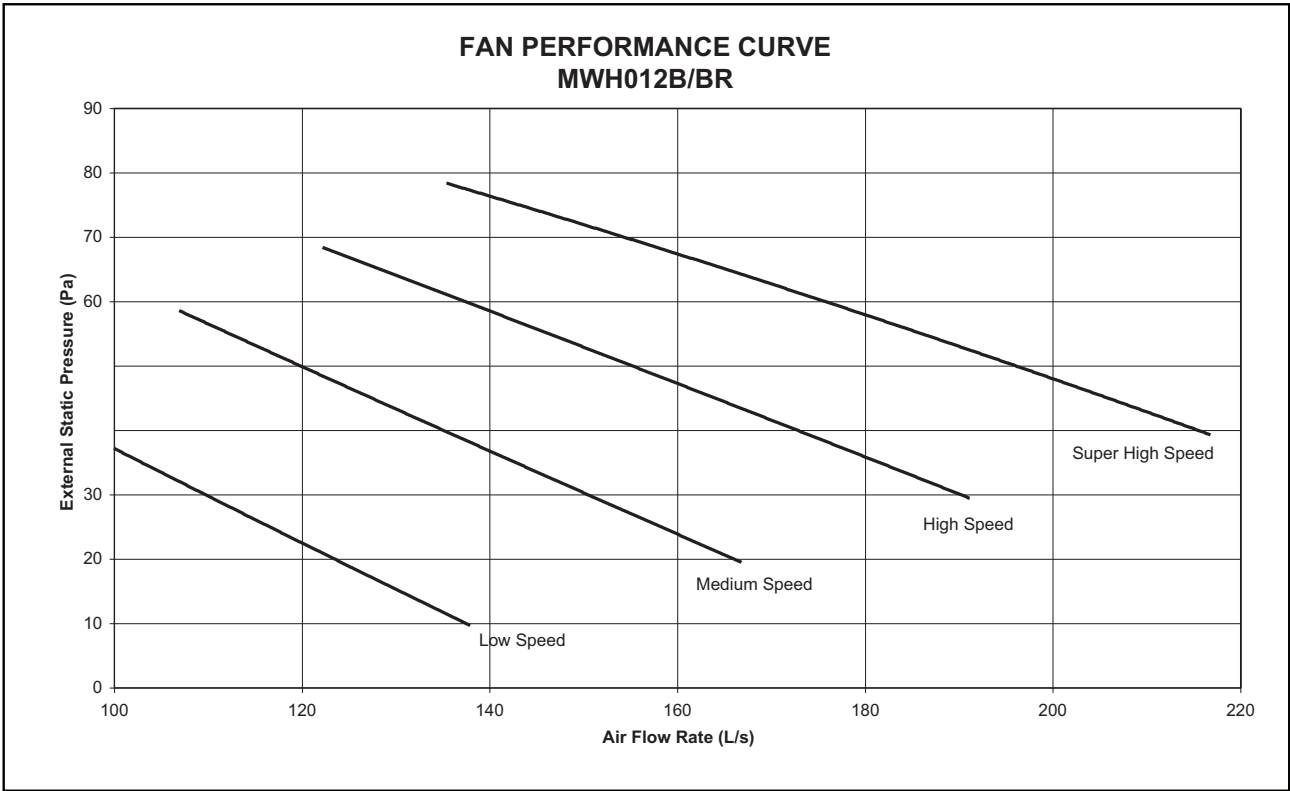
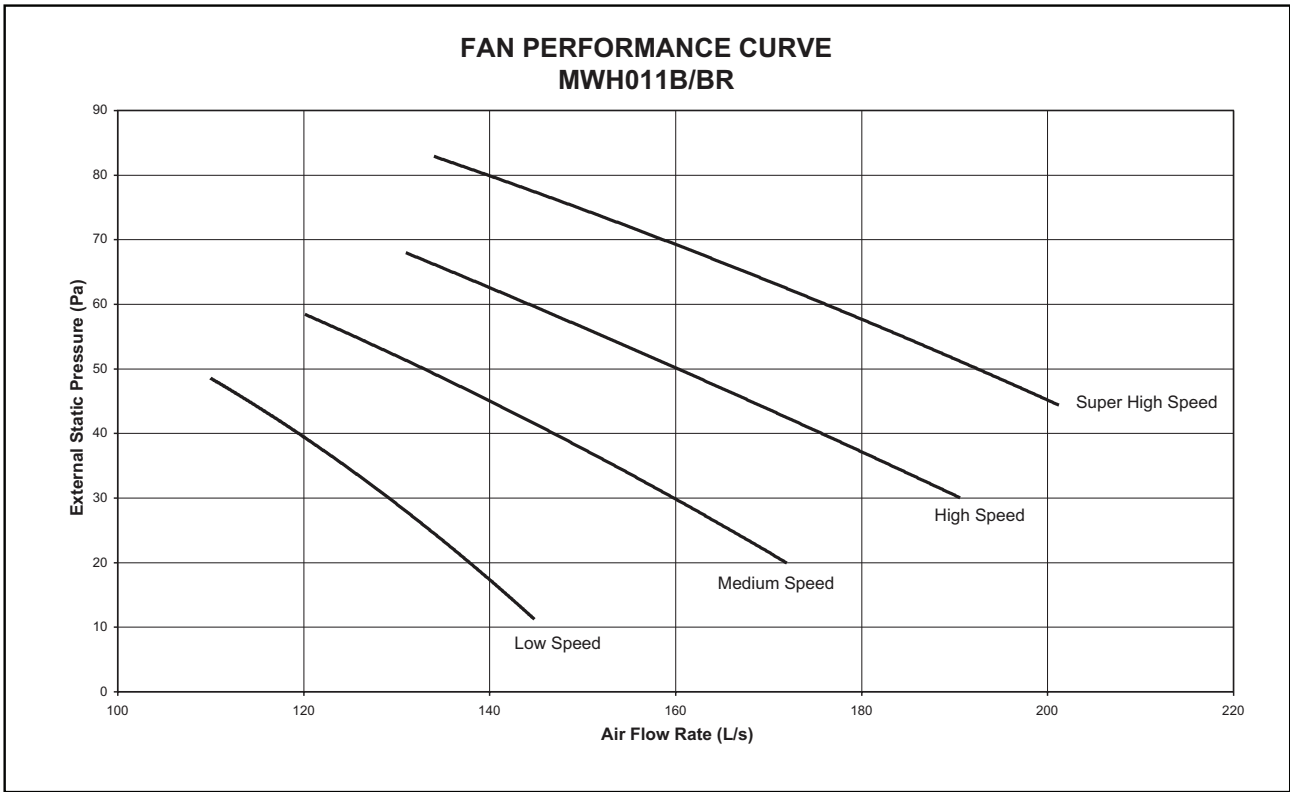




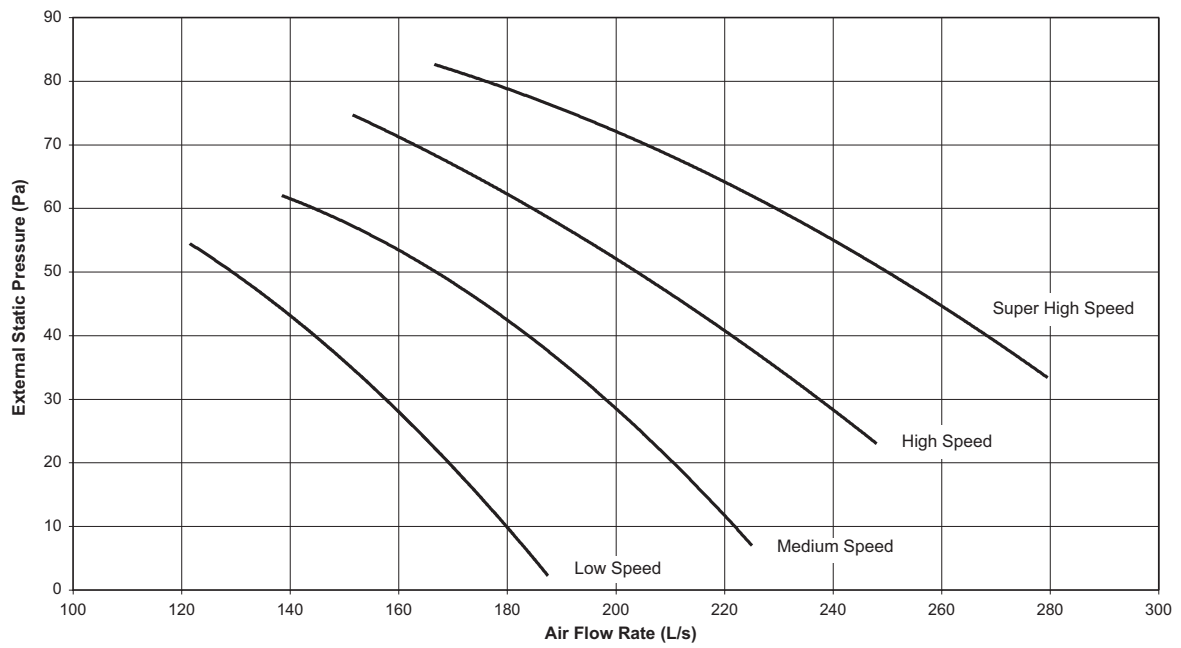


Selection Process

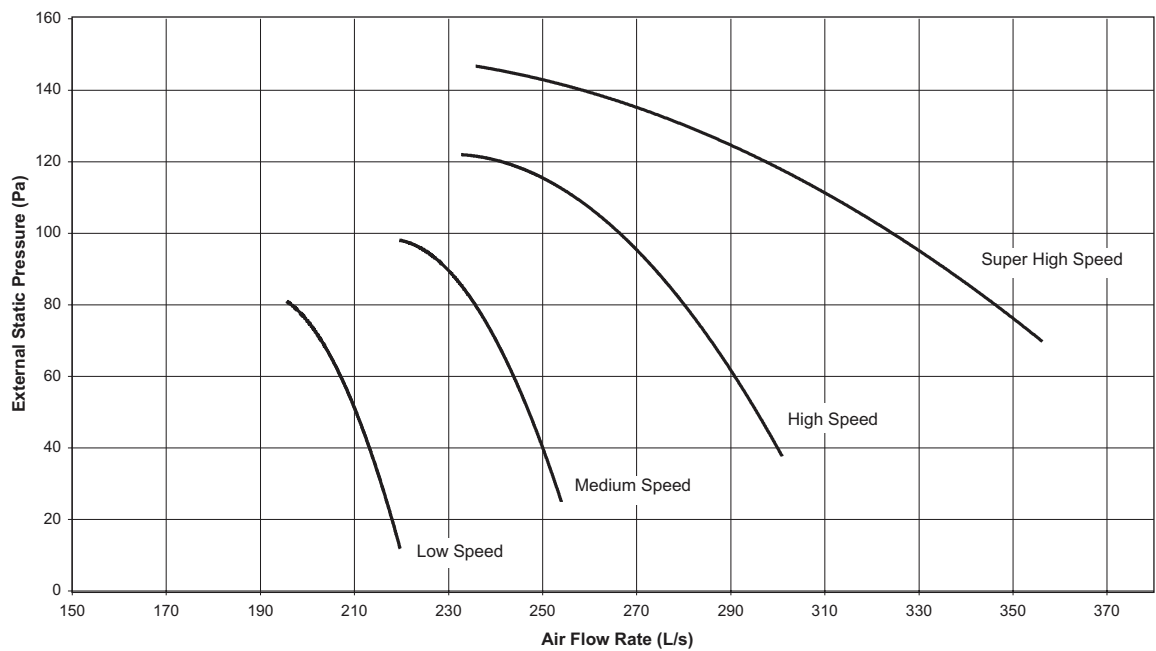
Fan Performance Chart



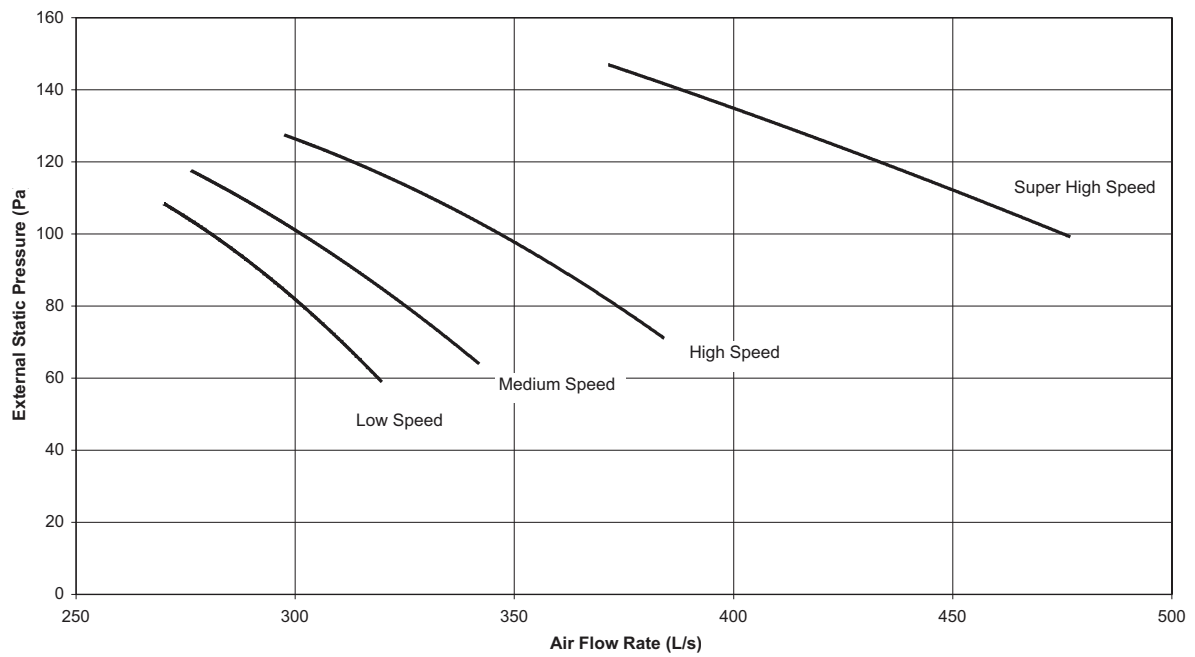
**FAN PERFORMANCE CURVE
MWH015B/BR**



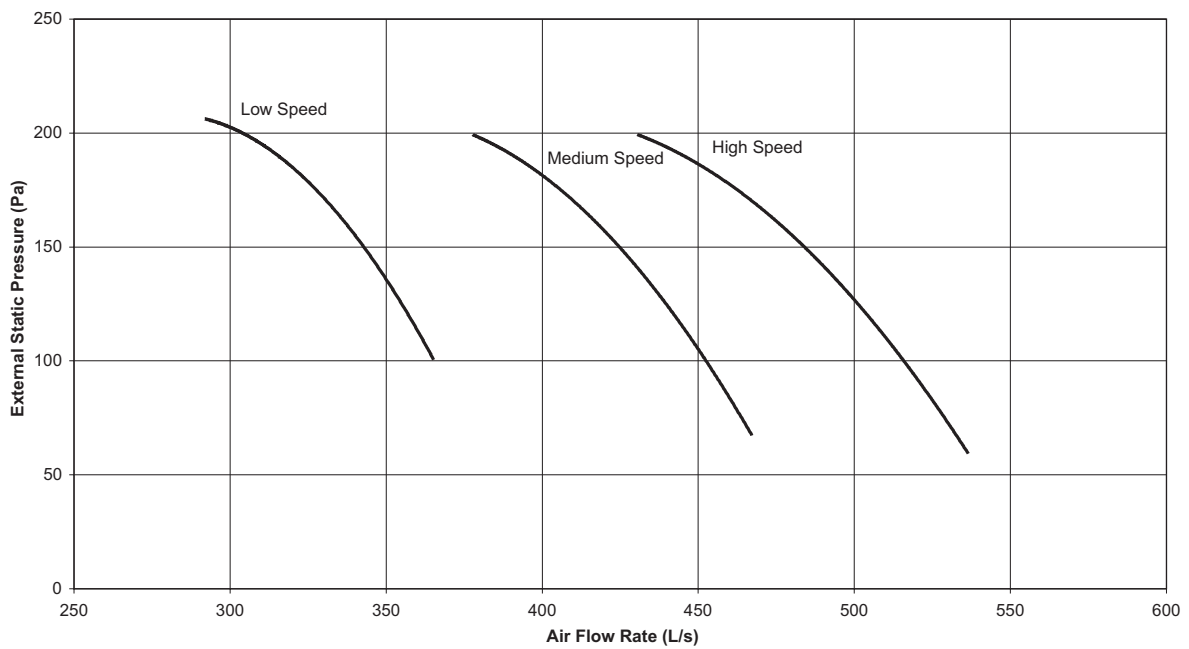
**FAN PERFORMANCE CURVE
MWH020B/BR**



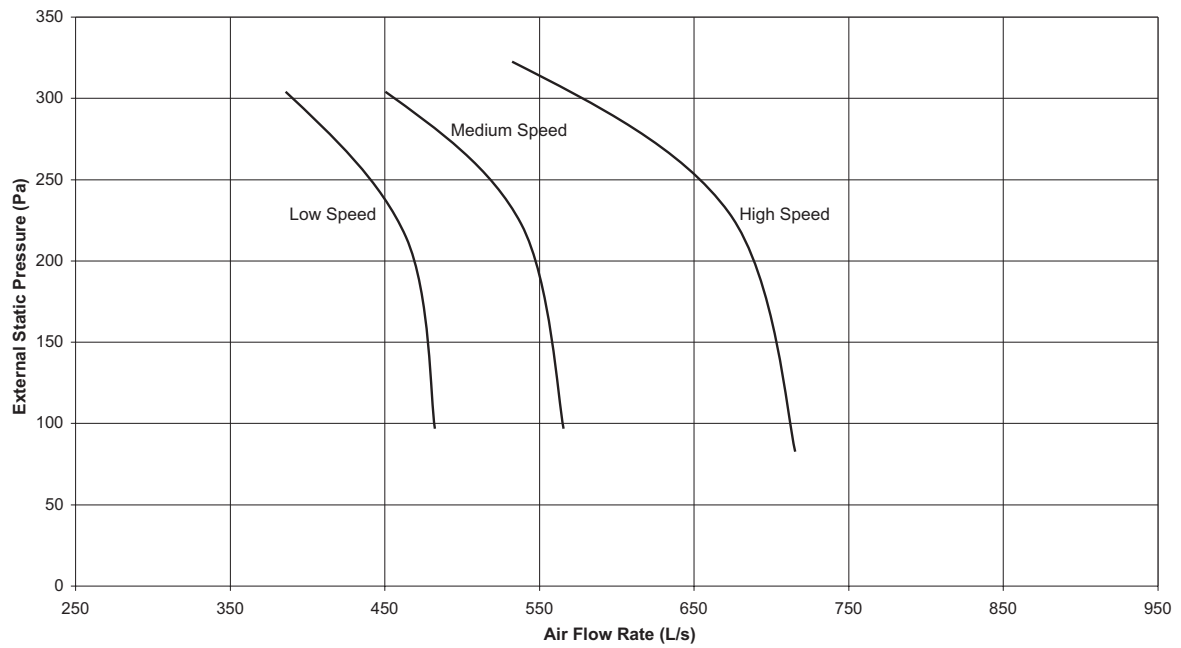
**FAN PERFORMANCE CURVE
MWH025B/BR**



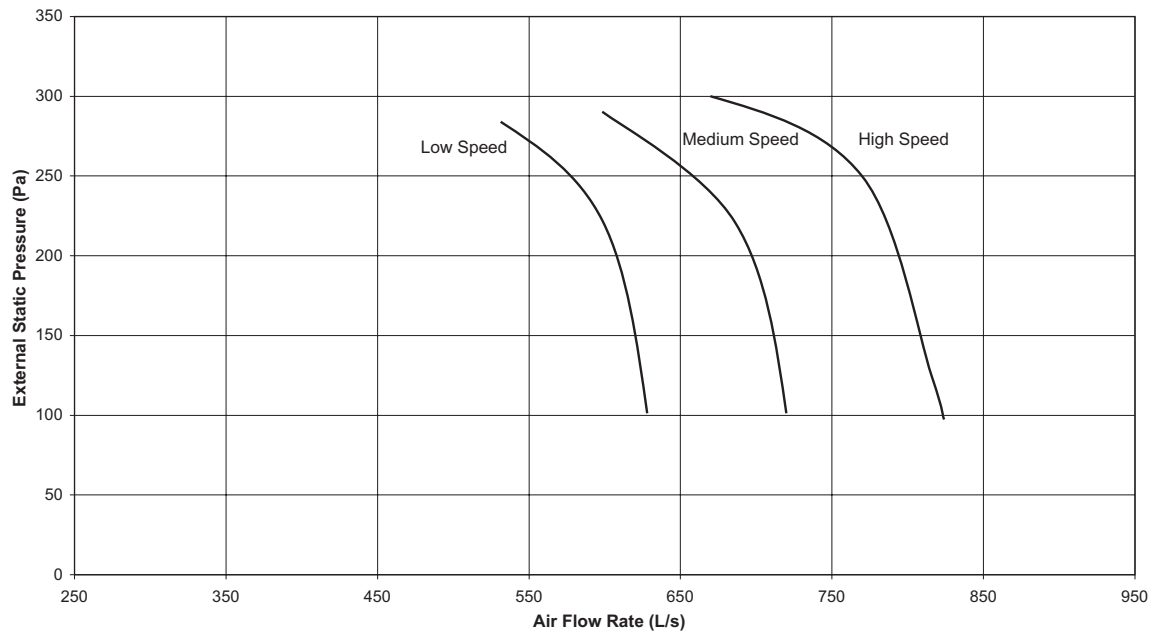
**FAN PERFORMANCE CURVE
MWH030B/BR**



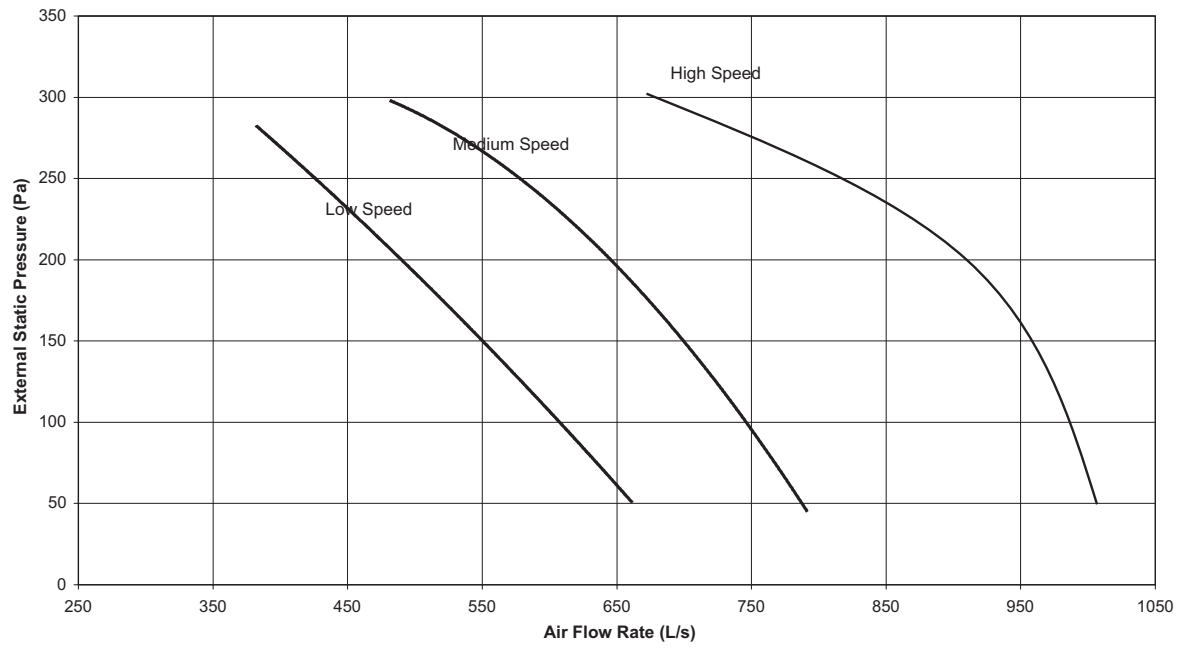
**FAN PERFORMANCE CURVE
MWH040B/BR**



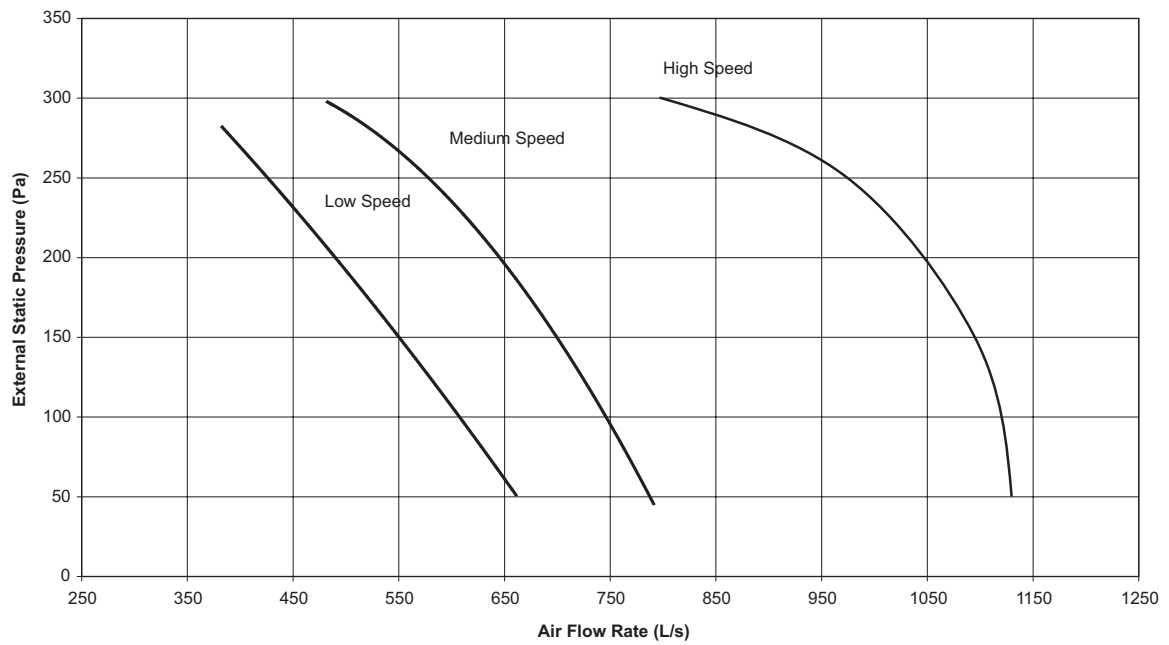
**FAN PERFORMANCE CURVE
MWH050B/BR**



**FAN PERFORMANCE CURVE
MWH060B/BR**



**FAN PERFORMANCE CURVE
MWH070B/BR**



Engineering & Physical Data

Specifications

General Data - Cooling Only (R22)

MODEL				MWH 011B		MWH 012B				
NOMINAL CAPACITY				Btu/h	11600		12000			
				W	3400		3520			
NOMINAL TOTAL INPUT POWER				W	790		775			
NOMINAL RUNNING CURRENT				A	3.5					
POWER SOURCE				V/Ph/Hz	220-240 / 1 / 50					
EER				W/W	4.30		4.54			
REFRIGERANT TYPE					R22					
REFRIGERANT CONTROL (EXPANSION DEVICE)					OUTDOOR CAP. TUBE					
EVAPORATOR	CONTROL		AIR DISCHARGE OPERATION		DUCTED					
					APW04A or SLM15A					
	AIR FLOW			l/s / CFM		180 / 380				
	EXTERNAL STATIC PRESSURE			Pa (in.wg.)		60 (0.2)				
	SOUND PRESSURE LEVEL			dBA		42 37				
	CONDENSATE DRAIN SIZE			mm/in		19.1 / 3/4				
CONDENSER	WATER FLOW RATE			l/s / m ³ /h		0.17 / 0.60		0.21 / 0.75		
	WATER PRESSURE DROP			kPa		6.70		8.20		
	UNIT DIMENSION		HEIGHT	mm/in		250 / 9.8		325 / 12.8		
			WIDTH	mm/in		1040 / 40.9		1035 / 40.7		
			DEPTH	mm/in		495 / 19.5		500 / 19.7		
	PACKING DIMENSION		HEIGHT	mm/in		436 / 17.2		520 / 20.5		
			WIDTH	mm/in		1200 / 47.2				
			DEPTH	mm/in		660 / 26.0				
	UNIT WEIGHT			kg/lb		58 / 128		61 / 134		
	PIPE CONNECTION		TYPE			ADAPTOR (BSP) MALE				
			SIZE	INLET	mm/in		12.7 / 1/2			
				OUTLET	mm/in		12.7 / 1/2			
REFRIGERANT CHARGE				kg/lb		0.53 / 1.17		0.63 / 1.39		

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

a) COOLING - INDOOR 27.0°C DB / 19.0°C WB; ENTERING WATER TEMPERATURE 30.0°C, LEAVING WATER TEMPERATURE 35.0°C

b) HEATING - INDOOR 20.0°C DB; ENTERING WATER TEMPERATURE 20.0°C

3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

MODEL				MWH 015B	MWH 020B
NOMINAL CAPACITY			Btu/h	14400	19500
			W	4220	5720
NOMINAL TOTAL INPUT POWER			W	1253	1561
NOMINAL RUNNING CURRENT			A	5.90	7.00
POWER SOURCE			V/Ph/Hz 220-240 / 1 / 50		
EER			W/W	3.37	3.66
REFRIGERANT TYPE				R22	
REFRIGERANT CONTROL (EXPANSION DEVICE)				OUTDOOR CAP. TUBE	
EVAPORATOR	CONTROL		AIR DISCHARGE		DUCTED
			OPERATION		APW04A or SLM15A
	AIR FLOW		l/s / CFM	222 / 470	287 / 600
	EXTERNAL STATIC PRESSURE		Pa (in.wg.)	60 (0.2)	120 (0.5)
	SOUND PRESSURE LEVEL		dBA	41	45
	CONDENSATE DRAIN SIZE		mm/in	19.1 / 3/4	
CONDENSER	WATER FLOW RATE		l/s / m ³ /h	0.25 / 0.90	0.29 / 1.05
	WATER PRESSURE DROP		kPa	9.80	11.60
	UNIT DIMENSION	HEIGHT	mm/in	337 / 13.3	353 / 13.9
		WIDTH	mm/in	1074 / 42.3	1183 / 46.6
		DEPTH	mm/in	500 / 19.7	540 / 21.3
	PACKING DIMENSION	HEIGHT	mm/in	520 / 20.5	536 / 21.1
		WIDTH	mm/in	1200 / 47.2	1329 / 52.3
		DEPTH	mm/in	688 / 27.1	728 / 28.7
	UNIT WEIGHT		kg/lb	68 / 150	71 / 157
	PIPE CONNECTION	TYPE		ADAPTOR (BSP) MALE	
		SIZE	INLET	mm/in	12.7 / 1/2
			OUTLET	mm/in	12.7 / 1/2
REFRIGERANT CHARGE			kg/lb	0.75 / 1.65	

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2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

a) COOLING - INDOOR 27.0°C DB / 19.0°C WB; ENTERING WATER TEMPERATURE 30.0°C, LEAVING WATER TEMPERATURE 35.0°C

b) HEATING - INDOOR 20.0°C DB; ENTERING WATER TEMPERATURE 20.0°C

3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

General Data - Cooling Only (R22)

MODEL				MWH 025B	
NOMINAL CAPACITY			Btu/h		26000
			W		7620
NOMINAL TOTAL INPUT POWER			W		1894
NOMINAL RUNNING CURRENT			A		8.9
POWER SOURCE			V/Ph/Hz		220-240 / 1 / 50
EER			W/W		4.02
REFRIGERANT TYPE				R22	
REFRIGERANT CONTROL (EXPANSION DEVICE)				OUTDOOR CAP. TUBE	
EVAPORATOR	CONTROL		AIR DISCHARGE		DUCTED
			OPERATION		APW04A or SLM15A
	AIR FLOW		l/s / CFM	415 / 870	
	EXTERNAL STATIC PRESSURE		Pa (in.wg.)	129 (0.5)	
	SOUND PRESSURE LEVEL		dBA	47	
CONDENSATE DRAIN SIZE			mm/in	19.1 / 3/4	
CONDENSER	WATER FLOW RATE		l/s / m ³ /h	0.47 / 1.70	
	WATER PRESSURE DROP		kPa	22	
	UNIT DIMENSION	HEIGHT	mm/in	340 / 13.4	
		WIDTH	mm/in	1328 / 52.3	
		DEPTH	mm/in	540 / 21.3	
	PACKING DIMENSION	HEIGHT	mm/in	526 / 20.7	
		WIDTH	mm/in	1484 / 58.4	
		DEPTH	mm/in	728 / 28.7	
	UNIT WEIGHT		kg/lb	101 / 223	
	PIPE CONNECTION		TYPE		ADAPTOR (BSP) MALE
			SIZE	LIQUID	mm/in
GAS				mm/in	12.7 / 1/2
REFRIGERANT CHARGE			kg/lb	(0.50 / 0.58) / (1.10 / 1.28)	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - INDOOR 27.0°C DB / 19.0°C WB; ENTERING WATER TEMPERATURE 30.0°C, LEAVING WATER TEMPERATURE 35.0°C
b) HEATING - INDOOR 20.0°C DB; ENTERING WATER TEMPERATURE 20.0°C

3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

MODEL				MWH 030B		MWH 040B	
NOMINAL CAPACITY			Btu/h	29920		44870	
			W	8800		13200	
NOMINAL TOTAL INPUT POWER			W	2485		3897	
NOMINAL RUNNING CURRENT			A	11.9		18.6	
POWER SOURCE			V/Ph/Hz	220-240 / 1 / 50			
EER			W/W	3.54		3.39	
REFRIGERANT TYPE				R22			
REFRIGERANT CONTROL (EXPANSION DEVICE)				OUTDOOR CAP. TUBE			
EVAPORATOR	CONTROL		AIR DISCHARGE		DUCTED		
			OPERATION		APW04A or SLM15A		
	AIR FLOW		l/s / CFM	450 / 940		625 / 1325	
	EXTERNAL STATIC PRESSURE		Pa (in.wg.)	190 (0.8)		270 (1.1)	
	SOUND PRESSURE LEVEL		dBA	50			
CONDENSER	CONDENSATE DRAIN SIZE		mm/in	19.1 / 3/4			
	WATER FLOW RATE		l/s / m ³ /h	0.47 / 1.70		0.71 / 2.54	
	WATER PRESSURE DROP		kPa	4.25		21.30	
	UNIT DIMENSION	HEIGHT	mm/in	370 / 14.6		434 / 17.1	
		WIDTH	mm/in	1297 / 51.1		1376 / 54.2	
		DEPTH	mm/in	745 / 29.3		792 / 31.2	
	PACKING DIMENSION	HEIGHT	mm/in	521 / 20.5		585 / 23.0	
		WIDTH	mm/in	1356 / 53.4		1446 / 56.9	
		DEPTH	mm/in	778 / 30.6		833 / 32.8	
	UNIT WEIGHT		kg/lb	107 / 238		146 / 322	
	PIPE CONNECTION	TYPE			OUTER GROOVE COPPER		
		SIZE	LIQUID	mm/in	19.1 / 3/4		
			GAS	mm/in	19.1 / 3/4		
REFRIGERANT CHARGE			kg/lb	0.7x2 / 1.55x2		0.8x2 / 1.77x2	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - INDOOR 26.7°C DB / 19.4°C WB; ENTERING WATER TEMPERATURE 29.4°C, LEAVING WATER TEMPERATURE 35.0°C
b) HEATING - INDOOR 21.1°C DB; ENTERING WATER TEMPERATURE 21.1°C

3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

General Data - Cooling Only (R22)

MODEL				MWH 050B		MWH 060B	
NOMINAL CAPACITY				Btu/h	49880	63160	
				W	14600	18500	
NOMINAL TOTAL INPUT POWER				W	4482	5505	
NOMINAL RUNNING CURRENT				A	21.6	13.3	
POWER SOURCE				V/Ph/Hz	220-240 / 1 / 50	380-415 / 3 / 50	
EER				W/W	3.26	3.36	
REFRIGERANT TYPE					R22		
REFRIGERANT CONTROL (EXPANSION DEVICE)					OUTDOOR CAP. TUBE		
EVAPORATOR	CONTROL		AIR DISCHARGE		DUCTED		
			OPERATION		APW04A or SLM15A		
	AIR FLOW			l/s / CFM	710 / 1470	900 / 1910	
	EXTERNAL STATIC PRESSURE			Pa (in.wg.)	290 (1.2)	210 (0.8)	
	SOUND PRESSURE LEVEL			dBA	51	53	
	CONDENSATE DRAIN SIZE			mm/in	19.1 / 3/4		
CONDENSER	WATER FLOW RATE			l/s / m ³ /h	0.81 / 2.91	1.01 / 3.63	
	WATER PRESSURE DROP			kPa	33.00	40.00	
	UNIT DIMENSION	HEIGHT	mm/in	434 / 17.1	500 / 19.7		
		WIDTH	mm/in	1376 / 54.2	1576 / 62.0		
		DEPTH	mm/in	792 / 31.2	843 / 33.2		
	PACKING DIMENSION	HEIGHT	mm/in	585 / 23.0	670 / 26.4		
		WIDTH	mm/in	1446 / 56.9	1656 / 65.2		
		DEPTH	mm/in	833 / 32.8	878 / 34.6		
	UNIT WEIGHT			kg/lb	150 / 331	215 / 474	
	PIPE CONNECTION	TYPE			OUTER GROOVE COPPER		
		SIZE	LIQUID	mm/in	19.1 / 3/4	25.4 / 1.0	
			GAS	mm/in	19.1 / 3/4	25.4 / 1.0	
REFRIGERANT CHARGE				kg/lb	0.85x2 / 1.88x2	1.05x2 / 2.32x2	

- 1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
- 2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
- a) COOLING - INDOOR 26.7°C DB / 19.4°C WB; ENTERING WATER TEMPERATURE 29.4°C, LEAVING WATER TEMPERATURE 35.0°C
- b) HEATING - INDOOR 21.1°C DB; ENTERING WATER TEMPERATURE 21.1°C
- 3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

MODEL				MWH 070B		
NOMINAL CAPACITY			Btu/h	76460		
			W	22400		
NOMINAL TOTAL INPUT POWER			W	6041		
NOMINAL RUNNING CURRENT			A	14.8		
POWER SOURCE			V/Ph/Hz	380-415 / 3 / 50		
EER			W/W	3.71		
REFRIGERANT TYPE				R22		
REFRIGERANT CONTROL (EXPANSION DEVICE)				OUTDOOR CAP. TUBE		
EVAPORATOR	CONTROL	AIR DISCHARGE		DUCTED		
		OPERATION		APW04A or SLM15A		
	AIR FLOW		l/s / CFM	915 / 1940		
	EXTERNAL STATIC PRESSURE		Pa (in.wg.)	270 (1.1)		
	SOUND PRESSURE LEVEL		dBA	53		
	CONDENSATE DRAIN SIZE		mm/in	19.05 / 3/4		
CONDENSER	WATER FLOW RATE		l/s / m ³ /h	1.24 / 4.45		
	WATER PRESSURE DROP		kPa	58		
	UNIT DIMENSION	HEIGHT	mm/in	500 / 19.7		
		WIDTH	mm/in	1576 / 62.0		
		DEPTH	mm/in	843 / 33.2		
	PACKING DIMENSION	HEIGHT	mm/in	670 / 26.4		
		WIDTH	mm/in	1656 / 65.2		
		DEPTH	mm/in	878 / 34.6		
	UNIT WEIGHT		kg/lb	225 / 496		
	PIPE CONNECTION	TYPE			OUTER GROOVE COPPER	
		SIZE	LIQUID	mm/in	25.4 / 1.0	
			GAS	mm/in	25.4 / 1.0	
REFRIGERANT CHARGE			kg/lb	1.2x2 / 2.65x2		

- 1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.
- 2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :
- a) COOLING - INDOOR 26.7°C DB / 19.4°C WB; ENTERING WATER TEMPERATURE 29.4°C, LEAVING WATER TEMPERATURE 35.0°C
- b) HEATING - INDOOR 21.1°C DB; ENTERING WATER TEMPERATURE 21.1°C
- 3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

General Data - Heat pump (R22)

MODEL				MWH 011BR	MWH 012BR		
NOMINAL COOLING CAPACITY			Btu/h	11600	12000		
			W	3400	3520		
NOMINAL HEATING CAPACITY			Btu/h	13000	12700		
			W	3810	3720		
NOMINAL TOTAL INPUT POWER (COOLING)			W	790	775		
NOMINAL TOTAL INPUT POWER (HEATING)			W	745	745		
NOMINAL RUNNING CURRENT (COOLING)			A	3.5			
NOMINAL RUNNING CURRENT (HEATING)			A	3.3	3.4		
POWER SOURCE			V/Ph/Hz	220-240 / 1 / 50			
EER			W/W	4.30	4.54		
COP			W/W	5.11	4.99		
REFRIGERANT TYPE				R22			
REFRIGERANT CONTROL (EXPANSION DEVICE)				OUTDOOR CAP. TUBE			
EVAPORATOR	CONTROL		AIR DISCHARGE		DUCTED		
			OPERATION		APW04A or SLM15A		
	AIR FLOW		l/s / CFM	180 / 380			
	EXTERNAL STATIC PRESSURE		Pa (in.wg.)	60 (0.2)			
	SOUND PRESSURE LEVEL		dBA	42	37		
CONDENSATE DRAIN SIZE			mm/in	19.1 / 3/4			
CONDENSER	WATER FLOW RATE		l/s / m ³ /h	0.17 / 0.60	0.21 / 0.75		
	WATER PRESSURE DROP		kPa	6.70	8.20		
	UNIT DIMENSION	HEIGHT	mm/in	250 / 9.8	325 / 12.8		
		WIDTH	mm/in	1040 / 40.9	1035 / 40.7		
		DEPTH	mm/in	495 / 19.5	500 / 19.7		
	PACKING DIMENSION	HEIGHT	mm/in	436 / 17.2	520 / 20.5		
		WIDTH	mm/in	1200 / 47.2			
		DEPTH	mm/in	660 / 26.0			
	UNIT WEIGHT		kg/lb	58 / 128	61 / 134		
	PIPE CONNECTION		TYPE		ADAPTOR (BSP) MALE		
			SIZE	LIQUID	mm/in	12.7 / 1/2	
				GAS	mm/in	12.7 / 1/2	
REFRIGERANT CHARGE			kg/lb	0.53 / 1.17	0.63 / 1.39		

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - INDOOR 27.0°C DB / 19.0°C WB; ENTERING WATER TEMPERATURE 30.0°C, LEAVING WATER TEMPERATURE 35.0°C
b) HEATING - INDOOR 20.0°C DB; ENTERING WATER TEMPERATURE 20.0°C

3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

MODEL				MWH015BR	MWH020BR
NOMINAL COOLING CAPACITY			Btu/h	14400	19500
			W	4220	5720
NOMINAL HEATING CAPACITY			Btu/h	14800	17000
			W	4340	4980
NOMINAL TOTAL INPUT POWER (COOLING)			W	1253	1661
NOMINAL TOTAL INPUT POWER (HEATING)			W	1153	1361
NOMINAL RUNNING CURRENT (COOLING)			A	5.9	7.5
NOMINAL RUNNING CURRENT (HEATING)			A	5.5	6.2
POWER SOURCE			V/Ph/Hz	220-240 / 1 / 50	
EER			W/W	3.37	3.44
COP			W/W	3.76	3.66
REFRIGERANT TYPE				R22	
REFRIGERANT CONTROL (EXPANSION DEVICE)				OUTDOOR CAP. TUBE	
EVAPORATOR	CONTROL	AIR DISCHARGE		DUCTED	
		OPERATION		APW04A or SLM15A	
	AIR FLOW		l/s / CFM	222 / 470	287 / 600
	EXTERNAL STATIC PRESSURE		Pa (in.wg.)	60 (0.2)	120 (0.5)
	SOUND PRESSURE LEVEL		dBA	41	45
CONDENSATE DRAIN SIZE			mm/in	19.1 / 3/4	
CONDENSER	WATER FLOW RATE		l/s / m ³ /h	0.25 / 0.90	0.29 / 1.05
	WATER PRESSURE DROP		kPa	9.80	11.60
	UNIT DIMENSION	HEIGHT	mm/in	337 / 13.3	353 / 13.9
		WIDTH	mm/in	1074 / 42.3	1183 / 46.6
		DEPTH	mm/in	500 / 19.7	540 / 21.3
	PACKING DIMENSION	HEIGHT	mm/in	520 / 20.5	536 / 21.1
		WIDTH	mm/in	1200 / 47.2	1329 / 52.3
		DEPTH	mm/in	688 / 27.1	728 / 28.7
	UNIT WEIGHT		kg/lb	68 / 150	71 / 157
	PIPE CONNECTION	TYPE		ADAPTOR (BSP) MALE	
		SIZE	LIQUID	mm/in	12.7/ 1/2
			GAS	mm/in	12.7 / 1/2
REFRIGERANT CHARGE			kg/lb	0.75 / 1.65	0.80 / 1.76

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2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - INDOOR 27.0°C DB / 19.0°C WB; ENTERING WATER TEMPERATURE 30.0°C, LEAVING WATER TEMPERATURE 35.0°C
b) HEATING - INDOOR 20.0°C DB; ENTERING WATER TEMPERATURE 20.0°C

3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

General Data - Heat pump (R22)

MODEL				MWH 025BR		
NOMINAL COOLING CAPACITY			Btu/h	26000		
			W	7620		
NOMINAL HEATING CAPACITY			Btu/h	28800		
			W	8440		
NOMINAL TOTAL INPUT POWER (COOLING)			W	1894		
NOMINAL TOTAL INPUT POWER (HEATING)			W	1844		
NOMINAL RUNNING CURRENT (COOLING)			A	8.9		
NOMINAL RUNNING CURRENT (HEATING)			A	8.7		
POWER SOURCE			V/Ph/Hz	220-240 / 1 / 50		
EER			W/W	4.02		
COP			W/W	4.58		
REFRIGERANT TYPE				R22		
REFRIGERANT CONTROL (EXPANSION DEVICE)				OUTDOOR CAP. TUBE		
EVAPORATOR	CONTROL	AIR DISCHARGE OPERATION		DUCTED		
				APW04A or SLM15A		
	AIR FLOW		l/s / CFM	415 / 870		
	EXTERNAL STATIC PRESSURE		Pa (in.wg.)	129 (0.5)		
	SOUND PRESSURE LEVEL		dBA	47		
CONDENSER	CONDENSATE DRAIN SIZE		mm/in	19.1 / 3/4		
	WATER FLOW RATE		l/s / m ³ /h	0.47 / 1.70		
	WATER PRESSURE DROP		kPa	22		
	UNIT DIMENSION	HEIGHT	mm/in	340 / 13.4		
		WIDTH	mm/in	1328 / 52.3		
		DEPTH	mm/in	540 / 21.3		
	PACKING DIMENSION	HEIGHT	mm/in	526 / 20.7		
		WIDTH	mm/in	1484 / 58.4		
		DEPTH	mm/in	728 / 28.7		
	UNIT WEIGHT		kg/lb	101 / 223		
	PIPE CONNECTION	TYPE			ADAPTOR (BSP) MALE	
		SIZE	LIQUID	mm/in	12.7/ 1/2	
GAS			mm/in	12.7 / 1/2		
REFRIGERANT CHARGE			kg/lb	(0.50 / 0.58) / (1.10 / 1.28)		

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2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

a) COOLING - INDOOR 27.0°C DB / 19.0°C WB; ENTERING WATER TEMPERATURE 30.0°C, LEAVING WATER TEMPERATURE 35.0°C

b) HEATING - INDOOR 20.0°C DB; ENTERING WATER TEMPERATURE 20.0°C

3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

MODEL				MWH 030BR		MWH 040BR		
NOMINAL COOLING CAPACITY			Btu/h	29920		44870		
			W	8800		13200		
NOMINAL HEATING CAPACITY			Btu/h	31600		51520		
			W	9300		15100		
NOMINAL TOTAL INPUT POWER (COOLING)			W	2485		3897		
NOMINAL TOTAL INPUT POWER (HEATING)			W	2533		3995		
NOMINAL RUNNING CURRENT (COOLING)			A	11.9		18.1		
NOMINAL RUNNING CURRENT (HEATING)			A	12.1		18.7		
POWER SOURCE			V/Ph/Hz	220-240 / 1 / 50				
EER			W/W	3.54		3.39		
COP			W/W	3.67		3.78		
REFRIGERANT TYPE				R22				
REFRIGERANT CONTROL (EXPANSION DEVICE)				OUTDOOR CAP. TUBE				
EVAPORATOR	CONTROL	AIR DISCHARGE		DUCTED				
		OPERATION		APW04A or SLM15A				
	AIR FLOW		l/s / CFM	450 / 940		625 / 1325		
	EXTERNAL STATIC PRESSURE		Pa (in.wg.)	190 (0.8)		270 (1.1)		
	SOUND PRESSURE LEVEL		dBa	50				
	CONDENSATE DRAIN SIZE		mm/in	19.1 / 3/4				
CONDENSER	WATER FLOW RATE		l/s / m ³ /h	0.47 / 1.70		0.71 / 2.54		
	WATER PRESSURE DROP		kPa	4.25		21.30		
	UNIT DIMENSION	HEIGHT	mm/in	370 / 14.6		434 / 17.1		
		WIDTH	mm/in	1297 / 51.1		1376 / 54.2		
		DEPTH	mm/in	745 / 29.3		792 / 31.2		
	PACKING DIMENSION	HEIGHT	mm/in	521 / 20.5		585 / 23.0		
		WIDTH	mm/in	1356 / 53.4		1446 / 56.9		
		DEPTH	mm/in	778 / 30.6		833 / 32.8		
	UNIT WEIGHT		kg/lb	107 / 238		146 / 322		
	PIPE CONNECTION	TYPE			OUTER GROOVE COPPER			
		SIZE	LIQUID	mm/in	19.1 / 3/4			
			GAS	mm/in	19. / 3/4			
REFRIGERANT CHARGE			kg/lb	0.75x2 / 1.66x2		0.85x2 / 1.88x2		

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2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

a) COOLING - INDOOR 26.7°C DB / 19.4°C WB; ENTERING WATER TEMPERATURE 29.4°C, LEAVING WATER TEMPERATURE 35.0°C

b) HEATING - INDOOR 21.1°C DB; ENTERING WATER TEMPERATURE 21.1°C

3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

General Data - Heat pump (R22)

MODEL				MWH 050BR		MWH 060BR	
NOMINAL COOLING CAPACITY				Btu/h	49880	63160	
				W	14600	18500	
NOMINAL HEATING CAPACITY				Btu/h	56500	68140	
				W	16600	20000	
NOMINAL TOTAL INPUT POWER (COOLING)				W	4482	5505	
				W	4433	5846	
NOMINAL RUNNING CURRENT (COOLING)				A	21.6	13.4	
NOMINAL RUNNING CURRENT (HEATING)				A	21.2	13.9	
POWER SOURCE				V/Ph/Hz	220-240 / 1 / 50	380-415 / 3 / 50	
EER				W/W	3.26	3.36	
COP				W/W	3.74	3.42	
REFRIGERANT TYPE					R22		
REFRIGERANT CONTROL (EXPANSION DEVICE)					OUTDOOR CAP. TUBE		
EVAPORATOR	CONTROL		AIR DISCHARGE		DUCTED		
			OPERATION		APW04A or SLM15A		
	AIR FLOW		l/s / CFM	710 / 1470	900 / 1910		
	EXTERNAL STATIC PRESSURE		Pa (in.wg.)	290 (1.2)	210 (0.8)		
	SOUND PRESSURE LEVEL		dBA	51	53		
	CONDENSATE DRAIN SIZE		mm/in	19.1 / 3/4			
CONDENSER	WATER FLOW RATE		l/s / m ³ /h	0.81 / 2.91	1.01 / 3.63		
	WATER PRESSURE DROP		kPa	33.00	40.00		
	UNIT DIMENSION	HEIGHT	mm/in	434 / 17.1	500 / 19.7		
		WIDTH	mm/in	1376 / 54.2	1576 / 62.0		
		DEPTH	mm/in	792 / 31.2	843 / 33.2		
	PACKING DIMENSION	HEIGHT	mm/in	585 / 23.0	670 / 26.4		
		WIDTH	mm/in	1446 / 56.9	1656 / 65.2		
		DEPTH	mm/in	833 / 32.8	878 / 34.6		
	UNIT WEIGHT		kg/lb	150 / 331	215 / 474		
	PIPE CONNECTION	TYPE		OUTER GROOVE COPPER			
				SIZE	LIQUID	mm/in	19.1 / 3/4
GAS		mm/in	19.1 / 3/4		25.4 / 1.0		
REFRIGERANT CHARGE				kg/lb	1.0x2 / 2.2x2	1.45x2 / 3.2x2	

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2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - INDOOR 26.7°C DB / 19.4°C WB; ENTERING WATER TEMPERATURE 29.4°C, LEAVING WATER TEMPERATURE 35.0°C
b) HEATING - INDOOR 21.1°C DB; ENTERING WATER TEMPERATURE 21.1°C

3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

MODEL				MWH 070BR		
NOMINAL COOLING CAPACITY			Btu/h		76460	
			W		22400	
NOMINAL HEATING CAPACITY			Btu/h		76460	
			W		22400	
NOMINAL TOTAL INPUT POWER (COOLING)			W		6041	
NOMINAL TOTAL INPUT POWER (HEATING)			W		6236	
NOMINAL RUNNING CURRENT (COOLING)			A		14.8	
NOMINAL RUNNING CURRENT (HEATING)			A		15.2	
POWER SOURCE			V/Ph/Hz		380-415 / 3 / 50	
EER			W/W		3.71	
COP			W/W		3.59	
REFRIGERANT TYPE				R22		
REFRIGERANT CONTROL (EXPANSION DEVICE)				OUTDOOR CAP. TUBE		
EVAPORATOR	CONTROL		AIR DISCHARGE		DUCTED	
			OPERATION		APW04A or SLM15A	
	AIR FLOW		l/s / CFM	915 / 1940		
	EXTERNAL STATIC PRESSURE		Pa (in.wg.)	270 (1.1)		
	SOUND PRESSURE LEVEL		dBA	53		
CONDENSER	CONDENSATE DRAIN SIZE		mm/in	19.1 / 3/4		
	WATER FLOW RATE		l/s / m ³ /h	1.24 / 4.45		
	WATER PRESSURE DROP		kPa	58		
	UNIT DIMENSION	HEIGHT	mm/in	500 / 19.7		
		WIDTH	mm/in	1576 / 62.0		
		DEPTH	mm/in	843 / 33.2		
	PACKING DIMENSION	HEIGHT	mm/in	670 / 26.4		
		WIDTH	mm/in	1656 / 65.2		
		DEPTH	mm/in	878 / 34.6		
	UNIT WEIGHT		kg/lb	225 / 496		
	PIPE CONNECTION		TYPE		OUTER GROOVE COPPER	
			SIZE	LIQUID	mm/in	25.4 / 1.0
				GAS	mm/in	25.4 / 1.0
REFRIGERANT CHARGE			kg/lb	1.45x2 / 3.2x2		

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2) NOMINAL COOLING AND HEATING CAPACITY ARE BASED ON THE CONDITIONS BELOW :

- a) COOLING - INDOOR 26.7°C DB / 19.4°C WB; ENTERING WATER TEMPERATURE 29.4°C, LEAVING WATER TEMPERATURE 35.0°C
b) HEATING - INDOOR 21.1°C DB; ENTERING WATER TEMPERATURE 21.1°C

3) EFFECTIVE POWER INPUT IS USED IN THE RATED EER/COP CALCULATION, ACCORDING TO ISO STANDARD: ISO 5151 & ISO 13253.

Components Data- Cooling Only (R22)

MODEL					MWH 011B		MWH 012B	
FAN BLOWER	TYPE				CENTRIFUGAL FORWARD CURVE			
	Q'TY				2			
	MATERIAL				GALVANISED STEEL			
	DRIVE				DIRECT			
	DIAMETER		mm/in		113 / 4.45		134 / 5.28	
	LENGTH		mm/in		145 / 5.71		160 / 6.30	
FAN MOTOR	TYPE				PERMANENT SPLIT CAPACITOR			
	Q'TY				2			
	INDEX OF PROTECTION (IP)				N/A			
COMPRESSOR	TYPE				ROTARY			
	QUANTITY				1			
	OIL TYPE				ATMOS M60 OR SUNISO 4GDID			
	OIL AMOUNT		cm_ / fl.oz		300 / 10.56		350 / 12.32	
AIR COIL	TUBE	MATERIAL			INNER GROOVE COPPER			
		DIAMETER		mm/in	9.52 / 3/8			
		THICKNESS		mm/in	0.33 / 0.013			
	FIN	MATERIAL			ALUMINIUM			
		THICKNESS		mm/in	0.11 / 0.0043			
		FACE AREA		m ² /ft ²	0.1016 / 1.094		0.1509 / 1.624	
		ROW			3		3	
		FIN PER INCH			14			
AIR QUALITY	FILTER	TYPE			WASHABLE SARANET FILTER			
		QUANTITY		pc	1			
		SIZE	LENGTH	mm/in	586 / 23.07		626 / 24.65	
			WIDTH	mm/in	185.5 / 7.30		725 / 28.54	
			THICKNESS	mm/in	N/A		N/A	
CASING	MATERIAL				ELECTRO GALVANIZED STEEL			
	FINISHING				N/A			
	COLOUR				UNPAINTED			
OUTDOOR (HEAT EXCHANGER)	TYPE				TUBE IN TUBE (FINNED TUBE)			
	NOMINAL WATER FLOW RATE		l/s / m_/h		0.17 / 0.60		0.14 / 0.51	
	NOMINAL WATER PRESSURE DROP		kPa / psi		6.70 / 0.97		5.88 / 0.85	
	WATER PIPE SIZE		mm / in		12.7 / 1/2			
	WATER INLET (BSP) MALE		mm / in		12.7 / 1/2			
	WATER OUTLET (BSP) MALE		mm / in		12.7 / 1/2			

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Components Data- Cooling Only (R22)

MODEL					MWH 015B		MWH 020B			
FAN BLOWER	TYPE				CENTRIFUGAL FORWARD CURVE					
	Q'TY				2					
	MATERIAL				GALVANISED STEEL					
	DRIVE				DIRECT					
	DIAMETER		mm/in		134 / 5.28		200 / 7.87			
	LENGTH		mm/in		160 / 6.30		209 / 8.23			
FAN MOTOR	TYPE				PERMANENT SPLIT CAPACITOR					
	Q'TY				2					
	INDEX OF PROTECTION (IP)				N/A					
COMPRESSOR	TYPE				ROTARY					
	QUANTITY				1					
	OIL TYPE				ATMOS M60 OR SUNISO 4GDID					
	OIL AMOUNT		cm_ / fl.oz		410 / 14.43		430 / 15.13			
AIR COIL	TUBE	MATERIAL			INNER GROOVE COPPER					
		DIAMETER		mm/in		9.52 / 3/8				
		THICKNESS		mm/in		0.3 / 0.012		0.33 / 0.013		
	FIN	MATERIAL			ALUMINIUM					
		THICKNESS		mm/in		0.11 / 0.0043				
		FACE AREA		m²/ft²		0.1509 / 1.624		0.1951 / 2.100		
		ROW			3		3			
		FIN PER INCH			14					
AIR QUALITY	FILTER	TYPE			WASHABLE SARANET FILTER					
		QUANTITY		pc		1				
		SIZE	LENGTH		mm/in		626 / 24.65		726 / 28.58	
			WIDTH		mm/in		725 / 28.54		274.5 / 10.81	
			THICKNESS		mm/in		N/A		N/A	
CASING	MATERIAL				ELECTRO GALVANIZED STEEL					
	FINISHING				N/A					
	COLOUR				UNPAINTED					
OUTDOOR (HEAT EXCHANGER)	TYPE				TUBE IN TUBE (FINNED TUBE)					
	NOMINAL WATER FLOW RATE		l/s / m³/h		0.25 / 0.90		0.29 / 1.05			
	NOMINAL WATER PRESSURE DROP		kPa / psi		9.8 / 1.42		11.6 / 1.68			
	WATER PIPE SIZE		mm / in		12.7 / 1/2					
	WATER INLET (BSP) MALE		mm / in		12.7 / 1/2					
	WATER OUTLET (BSP) MALE		mm / in		12.7 / 1/2					

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Components Data- Cooling Only (R22)

MODEL					MWH 025B	MWH 030B
FAN BLOWER	TYPE				CENTRIFUGAL FORWARD CURVE	
	Q'TY				2	
	MATERIAL				GALVANISED STEEL	GI
	DRIVE				DIRECT	
	DIAMETER			mm/in	200 / 7.87	
	LENGTH			mm/in	209 / 8.23	190 / 7.48
FAN MOTOR	TYPE				PERMANENT SPLIT CAPACITOR	
	Q'TY				2	
	INDEX OF PROTECTION (IP)				N/A	
COMPRESSOR	TYPE				ROTARY	
	QUANTITY				2	
	OIL TYPE				ATMOS M60 OR SUNISO 4GDID	
	OIL AMOUNT			cm_ / fl.oz	350 / 12.32	430 / 15.13
AIR COIL	TUBE	MATERIAL			INNER GROOVE COPPER	
		DIAMETER		mm/in	9.52 / 3/8	
		THICKNESS		mm/in	0.3 / 0.012	0.33 / 0.013
	FIN	MATERIAL			ALUMINIUM	
		THICKNESS		mm/in	0.11 / 0.0043	
		FACE AREA		m ² /ft ²	0.1951 / 2.100	0.21 / 2.260
		ROW			3	4
		FIN PER INCH			14	
AIR QUALITY	FILTER	TYPE			WASHABLE SARANET FILTER	
		QUANTITY		pc	1	2
		SIZE	LENGTH	mm/in	626 / 24.65	342 / 13.5
			WIDTH	mm/in	725 / 28.54	283 / 11.1
			THICKNESS	mm/in	N/A	8 / 0.315
CASING	MATERIAL				ELECTRO GALVANIZED STEEL	
	FINISHING				N/A	
	COLOUR				UNPAINTED	
OUTDOOR (HEAT EXCHANGER)	TYPE				TUBE IN TUBE (FINNED TUBE)	
	NOMINAL WATER FLOW RATE			l/s / m_h	0.47 / 1.70	
	NOMINAL WATER PRESSURE DROP			kPa / psi	22 / 3.19	4.25 / 0.62
	WATER PIPE SIZE			mm / in	12.7 / 1/2	19.05 / 3/4
	WATER INLET (BSP) MALE			mm / in	12.7 / 1/2	19.05 / 3/4
	WATER OUTLET (BSP) MALE			mm / in	12.7 / 1/2	19.05 / 3/4

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Components Data- Cooling Only (R22)

MODEL					MWH 040B	MWH 050B
FAN BLOWER	TYPE				CENTRIFUGAL FORWARD CURVE	
	Q'TY				2	
	MATERIAL				GI	
	DRIVE				DIRECT	
	DIAMETER			mm/in	254 / 10	
	LENGTH			mm/in	203.2 / 8	
FAN MOTOR	TYPE				PERMANENT SPLIT CAPACITOR	
	Q'TY				2	
	INDEX OF PROTECTION (IP)				N/A	
COMPRESSOR	TYPE				ROTARY	
	QUANTITY				2	
	OIL TYPE				DIAMOND MS-56	
	OIL AMOUNT			cm_ / fl.oz	520 / 18.30	
AIR COIL	TUBE	MATERIAL			INNER GROOVE COPPER	
		DIAMETER		mm/in	9.52 / 3/8	
		THICKNESS		mm/in	0.33 / 0.013	
	FIN	MATERIAL			ALUMINIUM	
		THICKNESS		mm/in	0.11 / 0.0043	
		FACE AREA		m ² /ft ²	0.32 / 3.444	
		ROW			4	
		FIN PER INCH			11	14
AIR QUALITY	FILTER	TYPE			WASHABLE SARANET FILTER	
		QUANTITY		pc	3	
		SIZE	LENGTH	mm/in	284 / 11.2	
			WIDTH	mm/in	354 / 13.9	
			THICKNESS	mm/in	8 / 0.315	
CASING	MATERIAL				ELETRO GALVANIZED STEEL	
	FINISHING				N/A	
	COLOUR				UNPAINTED	
OUTDOOR (HEAT EXCHANGER)	TYPE				TUBE IN TUBE (FINNED TUBE)	
	NOMINAL WATER FLOW RATE			l/s / m ³ /h	0.71 / 2.54	0.81 / 2.91
	NOMINAL WATER PRESSURE DROP			kPa / psi	21.3 / 3.09	33 / 4.79
	WATER PIPE SIZE			mm / in	19.05 / 3/4	
	WATER INLET (BSP) MALE			mm / in	19.05 / 3/4	
	WATER OUTLET (BSP) MALE			mm / in	19.05 / 3/4	

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Components Data- Cooling Only (R22)

MODEL					MWH 060B		MWH 070B	
FAN BLOWER	TYPE				CENTRIFUGAL FORWARD CURVE			
	Q'TY				2			
	MATERIAL				GI			
	DRIVE				DIRECT			
	DIAMETER			mm/in	228.6 / 9			
	LENGTH			mm/in	177.8 / 7			
FAN MOTOR	TYPE				PERMANENT SPLIT CAPACITOR			
	Q'TY				2			
	INDEX OF PROTECTION (IP)				N/A			
COMPRESSOR	TYPE				SCROLL			
	QUANTITY				2			
	OIL TYPE				N/A			
	OIL AMOUNT			cm_ / fl.oz	N/A			
AIR COIL	TUBE	MATERIAL			INNER GROOVE COPPER			
		DIAMETER		mm/in	9.52 / 3/8			
		THICKNESS		mm/in	0.33 / 0.013			
	FIN	MATERIAL			ALUMINIUM			
		THICKNESS		mm/in	0.11 / 0.0043			
		FACE AREA		m ² /ft ²	0.4 / 4.306			
		ROW			4			
		FIN PER INCH			14			
AIR QUALITY	FILTER	TYPE			WASHABLE SARANET FILTER			
		QUANTITY		pc	2			
		SIZE	LENGTH	mm/in	440 / 17.3			
			WIDTH	mm/in	417 / 16.4			
			THICKNESS	mm/in	8 / 0.315			
CASING	MATERIAL				ELECTRO GALVANIZED STEEL			
	FINISHING				N/A			
	COLOUR				UNPAINTED			
OUTDOOR (HEAT EXCHANGER)	TYPE				TUBE IN TUBE (FINNED TUBE)			
	NOMINAL WATER FLOW RATE			l/s / m ³ /h	1.01 / 3.63		1.24 / 4.45	
	NOMINAL WATER PRESSURE DROP			kPa / psi	40 / 5.80		58 / 8.4	
	WATER PIPE SIZE			mm / in	25.4 / 1.0			
	WATER INLET (BSP) MALE			mm / in	25.4 / 1.0			
	WATER OUTLET (BSP) MALE			mm / in	25.4 / 1.0			

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

Components Data- Heating (R22)

MODEL					MWH 011BR	MWH 012BR
FAN BLOWER	TYPE				CENTRIFUGAL FORWARD CURVE	
	Q'TY				2	
	MATERIAL				GALVANISED STEEL	
	DRIVE				DIRECT	
	DIAMETER		mm/in		113 / 4.45	134 / 5.28
	LENGTH		mm/in		145 / 5.71	160 / 6.30
FAN MOTOR	TYPE				PERMANENT SPLIT CAPACITOR	
	Q'TY				2	
	INDEX OF PROTECTION (IP)				N/A	
COMPRESSOR	TYPE				ROTARY	
	QUANTITY				1	
	OIL TYPE				ATMOS M60 OR SUNISO 4GDID	
	OIL AMOUNT		cm_ / fl.oz		300 / 10.56	350 / 12.32
AIR COIL	TUBE	MATERIAL			INNER GROOVE COPPER	
		DIAMETER		mm/in	9.52 / 3/8	
		THICKNESS		mm/in	0.33 / 0.013	
	FIN	MATERIAL			ALUMINIUM	
		THICKNESS		mm/in	0.11 / 0.0043	
		FACE AREA		m²/ft²	0.1016 / 1.094	0.1509 / 1.624
		ROW			3	3
		FIN PER INCH			14	
AIR QUALITY	FILTER	TYPE			WASHABLE SARANET FILTER	
		QUANTITY		pc	1	
		SIZE	LENGTH	mm/in	586 / 23.07	626 / 24.65
			WIDTH	mm/in	185.5 / 7.30	725 / 28.54
			THICKNESS	mm/in	N/A	N/A
		CASING	MATERIAL			
FINISHING				N/A		
COLOUR				UNPAINTED		
OUTDOOR (HEAT EXCHANGER)	TYPE				TUBE IN TUBE (FINNED TUBE)	
	NOMINAL WATER FLOW RATE		l/s / m³/h		0.17 / 0.60	0.14 / 0.51
	NOMINAL WATER PRESSURE DROP		kPa / psi		6.70 / 0.97	5.88 / 0.85
	WATER PIPE SIZE		mm / in		12.7 / 1/2	
	WATER INLET (BSP) MALE		mm / in		12.7 / 1/2	
	WATER OUTLET (BSP) MALE		mm / in		12.7 / 1/2	

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Components Data- Heating (R22)

MODEL					MWH 015BR		MWH 020BR	
FAN BLOWER	TYPE				CENTRIFUGAL FORWARD CURVE			
	Q'TY				2			
	MATERIAL				GALVANISED STEEL			
	DRIVE				DIRECT			
	DIAMETER			mm/in	134 / 5.28		200 / 7.87	
	LENGTH			mm/in	160 / 6.30		209 / 8.23	
FAN MOTOR	TYPE				PERMANENT SPLIT CAPACITOR			
	Q'TY				2			
	INDEX OF PROTECTION (IP)				NA			
COMPRESSOR	TYPE				ROTARY			
	QUANTITY				1			
	OIL TYPE				ATMOS M60 OR SUNISO 4GDID			
	OIL AMOUNT			cm_ / fl.oz	410 / 14.43		430 / 15.13	
AIR COIL	TUBE	MATERIAL			INNER GROOVE COPPER			
		DIAMETER			mm/in		9.52 / 3/8	
		THICKNESS			mm/in		0.3 / 0.012 0.33 / 0.013	
	FIN	MATERIAL			ALUMINIUM			
		THICKNESS			mm/in		0.11 / 0.0043	
		FACE AREA			m ² /ft ²		0.1509 / 1.624 0.1951 / 2.100	
		ROW			3		3	
		FIN PER INCH			14			
AIR QUALITY	FILTER	TYPE			WASHABLE SARANET FILTER			
		QUANTITY		pc	1			
		SIZE	LENGTH	mm/in	626 / 24.65		726 / 28.58	
			WIDTH	mm/in	725 / 28.54		274.5 / 10.81	
			THICKNESS	mm/in	N/A			
		CASING	MATERIAL				ELECTRO GALVANIZED STEEL	
FINISHING				N/A				
COLOUR				UNPAINTED				
OUTDOOR (HEAT EXCHANGER)	TYPE				TUBE IN TUBE (FINNED TUBE)			
	NOMINAL WATER FLOW RATE			l/s / m_h	0.25 / 0.90		0.29 / 1.05	
	NOMINAL WATER PRESSURE DROP			kPa / psi	9.8 / 1.42		11.6 / 1.68	
	WATER PIPE SIZE			mm / in	12.7 / 1/2			
	WATER INLET (BSP) MALE			mm / in	12.7 / 1/2			
	WATER OUTLET (BSP) MALE			mm / in	12.7 / 1/2			

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

Components Data- heatpump (R22)

MODEL				MWH 025BR		MWH 030BR		
FAN BLOWER	TYPE			CENTRIFUGAL FORWARD CURVE				
	Q'TY			2				
	MATERIAL			GALVANISED STEEL		GI		
	DRIVE			DIRECT				
	DIAMETER		mm/in	200 / 7.87				
	LENGTH		mm/in	209 / 8.23		190 / 7.48		
FAN MOTOR	TYPE			PERMANENT SPLIT CAPACITOR				
	Q'TY			2				
	INDEX OF PROTECTION (IP)			N/A				
COMPRESSOR	TYPE			ROTARY				
	QUANTITY			2				
	OIL TYPE			ATMOS M60 OR SUNISO 4GDID				
	OIL AMOUNT		cm_ / fl.oz	350 / 12.32		430 / 15.13		
AIR COIL	TUBE	MATERIAL		INNER GROOVE COPPER				
		DIAMETER		mm/in	9.52 / 3/8			
		THICKNESS		mm/in	0.3 / 0.012		0.33 / 0.013	
	FIN	MATERIAL		ALUMINIUM				
		THICKNESS		mm/in	0.11 / 0.0043			
		FACE AREA		m²/ft²	0.1951 / 2.100		0.21 / 2.260	
		ROW		3		4		
		FIN PER INCH		14				
AIR QUALITY	FILTER	TYPE		WASHABLE SARANET FILTER				
		QUANTITY		pc	1		2	
		SIZE	LENGTH	mm/in	626 / 24.65		342 / 13.5	
			WIDTH	mm/in	725 / 28.54		283 / 11.1	
			THICKNESS	mm/in	N/A		8 / 0.315	
CASING	MATERIAL			ELECTRO GALVANIZED STEEL				
	FINISHING			N/A				
	COLOUR			UNPAINTED				
OUTDOOR (HEAT EXCHANGER)	TYPE			TUBE IN TUBE (FINNED TUBE)				
	NOMINAL WATER FLOW RATE		l/s / m³/h	0.47 / 1.70				
	NOMINAL WATER PRESSURE DROP		kPa / psi	22 / 3.19		4.25 / 0.62		
	WATER PIPE SIZE		mm / in	12.7 / 1/2		19.05 / 3/4		
	WATER INLET (BSP) MALE		mm / in	12.7 / 1/2		19.05 / 3/4		
	WATER OUTLET (BSP) MALE		mm / in	12.7 / 1/2		19.05 / 3/4		

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Components Data- Heatpump (R22)

MODEL					MWH 040BR		MWH 050BR	
FAN BLOWER	TYPE				CENTRIFUGAL FORWARD CURVE			
	Q'TY				2			
	MATERIAL				GI			
	DRIVE				DIRECT			
	DIAMETER			mm/in	254 / 10			
	LENGTH			mm/in	203.2 / 8			
FAN MOTOR	TYPE				PERMANENT SPLIT CAPACITOR			
	Q'TY				2			
	INDEX OF PROTECTION (IP)				N/A			
COMPRESSOR	TYPE				ROTARY			
	QUANTITY				2			
	OIL TYPE				DIAMOND MS-56			
	OIL AMOUNT			cm_ / fl.oz	520 / 18.30			
AIR COIL	TUBE	MATERIAL			INNER GROOVE COPPER			
		DIAMETER		mm/in	9.52 / 3/8			
		THICKNESS		mm/in	0.33 / 0.013			
	FIN	MATERIAL			ALUMINIUM			
		THICKNESS		mm/in	0.11 / 0.0043			
		FACE AREA		m²/ft²	0.32 / 3.444			
		ROW			4			
		FIN PER INCH			11	14		
AIR QUALITY	FILTER	TYPE			WASHABLE SARANET FILTER			
		QUANTITY		pc	3			
		SIZE	LENGTH	mm/in	284 / 11.2			
			WIDTH	mm/in	354 / 13.9			
			THICKNESS	mm/in	8 / 0.315			
CASING	MATERIAL				ELETRO GALVANIZED STEEL			
	FINISHING				N/A			
	COLOUR				UNPAINTED			
OUTDOOR (HEAT EXCHANGER)	TYPE				TUBE IN TUBE (FINNED TUBE)			
	NOMINAL WATER FLOW RATE			l/s / m³/h	0.71 / 2.54		0.81 / 2.91	
	NOMINAL WATER PRESSURE DROP			kPa / psi	21.3 / 3.09		33 / 4.79	
	WATER PIPE SIZE			mm / in	19.05 / 3/4			
	WATER INLET (BSP) MALE			mm / in	19.05 / 3/4			
	WATER OUTLET (BSP) MALE			mm / in	19.05 / 3/4			

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Components Data- Heatpump (R22)

MODEL					MWH 060BR		MWH 070BR	
FAN BLOWER	TYPE				CENTRIFUGAL FORWARD CURVE			
	Q'TY				2			
	MATERIAL				GI			
	DRIVE				DIRECT			
	DIAMETER			mm/in	228.6 / 9			
	LENGTH			mm/in	177.8 / 7			
FAN MOTOR	TYPE				PERMANENT SPLIT CAPACITOR			
	Q'TY				2			
	INDEX OF PROTECTION (IP)				N/A			
COMPRESSOR	TYPE				SCROLL			
	QUANTITY				2			
	OIL TYPE				N/A			
	OIL AMOUNT			cm_ / fl.oz	N/A			
AIR COIL	TUBE	MATERIAL			INNER GROOVE COPPER			
		DIAMETER		mm/in	9.52 / 3/8			
		THICKNESS		mm/in	0.33 / 0.013			
	FIN	MATERIAL			ALUMINIUM			
		THICKNESS		mm/in	0.11 / 0.0043			
		FACE AREA		m ² /ft ²	0.4 / 4.306			
		ROW			4			
		FIN PER INCH			14			
AIR QUALITY	FILTER	TYPE			WASHABLE SARANET FILTER			
		QUANTITY		pc	2			
		SIZE	LENGTH	mm/in	440 / 17.3			
			WIDTH	mm/in	417 / 16.4			
			THICKNESS	mm/in	8 / 0.315			
CASING	MATERIAL				ELECTRO GALVANIZED STEEL			
	FINISHING				N/A			
	COLOUR				UNPAINTED			
OUTDOOR (HEAT EXCHANGER)	TYPE				TUBE IN TUBE (FINNED TUBE)			
	NOMINAL WATER FLOW RATE			l/s / m ³ /h	1.01 / 3.63		1.24 / 4.45	
	NOMINAL WATER PRESSURE DROP			kPa / psi	40 / 5.80		58 / 8.4	
	WATER PIPE SIZE			mm / in	25.4 / 1.0			
	WATER INLET (BSP) MALE			mm / in	25.4 / 1.0			
	WATER OUTLET (BSP) MALE			mm / in	25.4 / 1.0			

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Safety Devices- Cooling Only (R22)

MODEL				MWH 011B	MWH 012B
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		NC	
		OPEN	kPa / psi	2344.22 / 340	
		CLOSE	kPa / psi	2937.17 / 426	
	LOW PRESSURE SWITCH	TYPE		NO	
		OPEN	kPa / psi	48.26 / 7	
		CLOSE	kPa / psi	151.69 / 22	
	PHASE SEQUENCER			N/A	
	DISCHARGE THERMOSTAT SETTING			°C / °F	

MODEL				MWH 015B	MWH 020B
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		NC	
		OPEN	kPa / psi	2344.22 / 340	
		CLOSE	kPa / psi	2937.17 / 426	
	LOW PRESSURE SWITCH	TYPE		NO	
		OPEN	kPa / psi	48.26 / 7	
		CLOSE	kPa / psi	151.69 / 22	
	PHASE SEQUENCER			N/A	
	DISCHARGE THERMOSTAT SETTING			°C / °F	

MODEL				MWH 025B	MWH 030B
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		NC	AUTO RESET CATRIDGE
		OPEN	kPa / psi	2344.22 / 340	2800 / 406
		CLOSE	kPa / psi	2937.17 / 426	2400 / 348
	LOW PRESSURE SWITCH	TYPE		NO	AUTO RESET CATRIDGE
		OPEN	kPa / psi	48.26 / 7	50 / 7.25
		CLOSE	kPa / psi	151.69 / 22	150 / 21.76
	PHASE SEQUENCER			N/A	
	DISCHARGE THERMOSTAT SETTING			°C / °F	

MODEL				MWH 040B	MWH 050B
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		AUTO RESET CATRIDGE	
		OPEN	kPa / psi	2800 / 406	
		CLOSE	kPa / psi	2400 / 348	
	LOW PRESSURE SWITCH	TYPE		AUTO RESET CATRIDGE	
		OPEN	kPa / psi	50 / 7.25	
		CLOSE	kPa / psi	150 / 21.76	
	PHASE SEQUENCER			N/A	
	DISCHARGE THERMOSTAT SETTING			°C / °F	

MODEL				MWH 060B	MWH 070B
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		AUTO RESET CATRIDGE	
		OPEN	kPa / psi	2800 / 406	
		CLOSE	kPa / psi	2400 / 348	
	LOW PRESSURE SWITCH	TYPE		AUTO RESET CATRIDGE	
		OPEN	kPa / psi	50 / 7.25	
		CLOSE	kPa / psi	150 / 21.76	
	PHASE SEQUENCER			YES	
	DISCHARGE THERMOSTAT SETTING			°C / °F	

Safety Devices- Heatpump (R22)

MODEL				MWH 011BR	MWH 012BR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		NC	
		OPEN	kPa / psi	2344.22 / 340	
		CLOSE	kPa / psi	2937.17 / 426	
	LOW PRESSURE SWITCH	TYPE		NO	
		OPEN	kPa / psi	48.26 / 7	
		CLOSE	kPa / psi	151.69 / 22	
	PHASE SEQUENCER			N/A	
	DISCHARGE THERMOSTAT SETTING			°C / °F	

MODEL				MWH 015BR	MWH 020BR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		NC	
		OPEN	kPa / psi	2344.22 / 340	
		CLOSE	kPa / psi	2937.17 / 426	
	LOW PRESSURE SWITCH	TYPE		NO	
		OPEN	kPa / psi	48.26 / 7	
		CLOSE	kPa / psi	151.69 / 22	
	PHASE SEQUENCER			N/A	
	DISCHARGE THERMOSTAT SETTING			°C / °F	

MODEL				MWH 025BR	MWH 030BR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		NC	AUTO RESET CATRIDGE
		OPEN	kPa / psi	2344.22 / 340	2800 / 406
		CLOSE	kPa / psi	2937.17 / 426	2400 / 348
	LOW PRESSURE SWITCH	TYPE		NO	AUTO RESET CATRIDGE
		OPEN	kPa / psi	48.26 / 7	50 / 7.25
		CLOSE	kPa / psi	151.69 / 22	150 / 21.76
	PHASE SEQUENCER			N/A	
	DISCHARGE THERMOSTAT SETTING			°C / °F	

MODEL				MWH 040BR	MWH 050BR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		AUTO RESET CATRIDGE	
		OPEN	kPa / psi	2800 / 406	
		CLOSE	kPa / psi	2400 / 348	
	LOW PRESSURE SWITCH	TYPE		AUTO RESET CATRIDGE	
		OPEN	kPa / psi	50 / 7.25	
		CLOSE	kPa / psi	150 / 21.76	
	PHASE SEQUENCER			N/A	
	DISCHARGE THERMOSTAT SETTING			°C / °F	

MODEL				MWH 060BR	MWH 070BR
SAFETY DEVICE	HIGH PRESSURE SWITCH	TYPE		AUTO RESET CATRIDGE	
		OPEN	kPa / psi	2800 / 406	
		CLOSE	kPa / psi	2400 / 348	
	LOW PRESSURE SWITCH	TYPE		AUTO RESET CATRIDGE	
		OPEN	kPa / psi	50 / 7.25	
		CLOSE	kPa / psi	150 / 21.76	
	PHASE SEQUENCER			YES	
	DISCHARGE THERMOSTAT SETTING			°C / °F	

Performance Table

Performance Data

MWH 011B/BR

Cooling Only/ Cooling Mode (Heatpump)

Water Flow Rate = 0.36 m³/hr

Indoor, DB	Indoor, WB	Capacity	Entering Water Temperature, (°C)						
(°C)	(°C)	(kW)	13	20	25	30	35	40	45
27.0	15.5	TC	3.37	3.22	3.12	3.02	2.85	2.68	2.52
		SC	3.30	3.16	3.07	2.97	2.82	2.67	2.51
	17	TC	3.50	3.34	3.23	3.12	2.93	2.75	2.56
		SC	3.02	2.92	2.85	2.78	2.66	2.55	2.44
	19	TC	3.66	3.49	3.37	3.25	3.04	2.83	2.62
		SC	2.65	2.59	2.55	2.70	2.45	2.39	2.34
	20	TC	3.71	3.55	3.45	3.34	3.14	2.94	2.75
		SC	2.43	2.38	2.34	2.30	2.25	2.19	2.14
	23	TC	3.83	3.73	3.66	3.60	3.44	3.28	3.12
		SC	1.80	1.76	1.73	1.71	1.66	1.62	1.57
	24	TC	3.87	3.79	3.74	3.68	3.53	3.39	3.24
		SC	1.59	1.56	1.54	1.52	1.48	1.43	1.39

Water Flow Rate = 0.60 m³/hr

Indoor, DB	Indoor, WB	Capacity	Entering Water Temperature, (°C)						
(°C)	(°C)	(kW)	13	20	25	30	35	40	45
27.0	15.5	TC	3.52	3.37	3.26	3.15	2.98	2.81	2.63
		SC	3.45	3.31	3.21	3.11	2.95	2.79	2.63
	17	TC	3.66	3.49	3.38	3.26	3.07	2.87	2.68
		SC	3.16	3.05	2.98	2.90	2.79	2.67	2.55
	19	TC	3.83	3.65	3.53	3.40	3.18	2.96	2.74
		SC	2.78	2.71	2.67	2.82	2.56	2.50	2.45
	20	TC	3.88	3.72	3.60	3.49	3.28	3.08	2.87
		SC	2.54	2.49	2.45	2.41	2.35	2.29	2.24
	23	TC	4.00	3.90	3.83	3.76	3.59	3.43	3.26
		SC	1.88	1.84	1.81	1.79	1.74	1.69	1.64
	24	TC	4.05	3.97	3.91	3.85	3.70	3.54	3.39
		SC	1.66	1.63	1.61	1.59	1.54	1.50	1.45

Water Flow Rate = 0.84 m³/hr

Indoor, DB	Indoor, WB	Capacity	Entering Water Temperature, (°C)						
(°C)	(°C)	(kW)	13	20	25	30	35	40	45
27.0	15.5	TC	3.60	3.44	3.33	3.22	3.04	2.87	2.69
		SC	3.52	3.38	3.28	3.17	3.01	2.85	2.69
	17	TC	3.73	3.57	3.45	3.33	3.13	2.94	2.74
		SC	3.23	3.12	3.04	2.97	2.85	2.73	2.61
	19	TC	3.91	3.73	3.60	3.47	3.25	3.03	2.80
		SC	2.84	2.77	2.73	2.88	2.62	2.56	2.50
	20	TC	3.96	3.80	3.68	3.57	3.35	3.14	2.93
		SC	2.60	2.54	2.50	2.46	2.40	2.34	2.29
	23	TC	4.09	3.99	3.91	3.84	3.67	3.50	3.33
		SC	1.92	1.88	1.85	1.83	1.78	1.73	1.68
	24	TC	4.13	4.05	3.99	3.93	3.78	3.62	3.46
		SC	1.70	1.67	1.65	1.63	1.58	1.53	1.48

Note:

1. DB = Dry Bulb, WB = Wet Bulb, TC = Total Capacity, SC = Sensible Capacity
2. All datas above are generated at delta T = Leaving Water Temperature - Entering Water Temperature = 5°C

MWH 012B/BR
Cooling Only/ Cooling Mode (Heatpump)

Water Flow Rate = 0.45 m³/hr

Indoor, DB	Indoor, WB	Capacity	Entering Water Temperature, (°C)						
(°C)	(°C)	(kW)	13	20	25	30	35	40	45
27.0	15.5	TC	3.49	3.34	3.23	3.12	2.95	2.78	2.61
		SC	3.41	3.27	3.18	3.08	2.92	2.76	2.60
	17	TC	3.62	3.46	3.34	3.23	3.04	2.84	2.65
		SC	3.13	3.02	2.95	2.88	2.76	2.64	2.53
	19	TC	3.79	3.62	3.49	3.37	3.15	2.93	2.72
		SC	2.75	2.68	2.64	2.66	2.54	2.48	2.42
	20	TC	3.84	3.68	3.57	3.46	3.25	3.05	2.84
		SC	2.52	2.46	2.42	2.38	2.32	2.27	2.22
	23	TC	3.96	3.86	3.79	3.72	3.56	3.39	3.23
		SC	1.86	1.82	1.79	1.77	1.72	1.67	1.63
	24	TC	4.01	3.93	3.87	3.81	3.66	3.51	3.35
		SC	1.65	1.62	1.60	1.58	1.53	1.48	1.44

Water Flow Rate = 0.75 m³/hr

Indoor, DB	Indoor, WB	Capacity	Entering Water Temperature, (°C)						
(°C)	(°C)	(kW)	13	20	25	30	35	40	45
27.0	15.5	TC	3.65	3.49	3.38	3.27	3.09	2.91	2.73
		SC	3.57	3.42	3.32	3.22	3.05	2.89	2.72
	17	TC	3.78	3.62	3.50	3.37	3.17	2.97	2.77
		SC	3.27	3.16	3.08	3.01	2.88	2.76	2.64
	19	TC	3.97	3.78	3.65	3.52	3.29	3.07	2.84
		SC	2.87	2.81	2.76	2.78	2.65	2.59	2.53
	20	TC	4.01	3.85	3.73	3.61	3.40	3.19	2.97
		SC	2.63	2.57	2.53	2.49	2.43	2.37	2.32
	23	TC	4.15	4.04	3.97	3.89	3.72	3.55	3.37
		SC	1.94	1.90	1.88	1.85	1.80	1.75	1.70
	24	TC	4.19	4.11	4.05	3.99	3.83	3.67	3.51
		SC	1.72	1.69	1.67	1.65	1.60	1.55	1.50

Water Flow Rate = 1.05 m³/hr

Indoor, DB	Indoor, WB	Capacity	Entering Water Temperature, (°C)						
(°C)	(°C)	(kW)	13	20	25	30	35	40	45
27.0	15.5	TC	3.73	3.57	3.45	3.34	3.15	2.97	2.78
		SC	3.65	3.50	3.39	3.29	3.12	2.95	2.78
	17	TC	3.87	3.69	3.57	3.45	3.24	3.04	2.83
		SC	3.34	3.23	3.15	3.07	2.95	2.82	2.70
	19	TC	4.05	3.86	3.73	3.60	3.36	3.13	2.90
		SC	2.94	2.87	2.82	2.84	2.71	2.65	2.59
	20	TC	4.10	3.93	3.81	3.69	3.47	3.26	3.04
		SC	2.69	2.63	2.59	2.54	2.48	2.42	2.37
	23	TC	4.23	4.13	4.05	3.98	3.80	3.62	3.45
		SC	1.99	1.95	1.92	1.89	1.84	1.79	1.74
	24	TC	4.28	4.19	4.13	4.07	3.91	3.75	3.58
		SC	1.76	1.73	1.70	1.68	1.63	1.58	1.54

Note:

1. DB = Dry Bulb, WB = Wet Bulb, TC = Total Capacity, SC = Sensible Capacity
2. All datas above are generated at delta T = Leaving Water Temperature - Entering Water Temperature = 5°C

MWH 015B/BR
Cooling Only/ Cooling Mode (Heatpump)
Water Flow Rate = 0.54 m³/hr

Indoor, DB	Indoor, WB	Capacity	Entering Water Temperature, (°C)						
(°C)	(°C)	(kW)	13	20	25	30	35	40	45
27.0	15.5	TC	4.18	4.00	3.87	3.74	3.54	3.33	3.12
		SC	4.09	3.93	3.81	3.69	3.50	3.31	3.12
	17	TC	4.34	4.15	4.01	3.87	3.64	3.41	3.18
		SC	3.75	3.62	3.54	3.45	3.31	3.17	3.03
	19	TC	4.55	4.34	4.19	4.04	3.78	3.52	3.26
		SC	3.29	3.22	3.17	3.11	3.04	2.97	2.90
	20	TC	4.60	4.41	4.28	4.14	3.90	3.65	3.41
		SC	3.02	2.95	2.90	2.86	2.79	2.72	2.66
	23	TC	4.75	4.63	4.55	4.46	4.26	4.07	3.87
		SC	2.23	2.18	2.15	2.12	2.06	2.01	1.95
	24	TC	4.80	4.71	4.64	4.57	4.39	4.20	4.02
		SC	1.97	1.94	1.91	1.89	1.83	1.78	1.72

Water Flow Rate = 0.90 m³/hr

Indoor, DB	Indoor, WB	Capacity	Entering Water Temperature, (°C)						
(°C)	(°C)	(kW)	13	20	25	30	35	40	45
27.0	15.5	TC	4.37	4.18	4.05	3.92	3.70	3.48	3.27
		SC	4.28	4.10	3.98	3.86	3.66	3.46	3.26
	17	TC	4.54	4.33	4.19	4.05	3.81	3.57	3.33
		SC	3.92	3.79	3.70	3.60	3.46	3.31	3.17
	19	TC	4.76	4.54	4.38	4.22	3.95	3.68	3.40
		SC	3.45	3.37	3.31	3.25	3.18	3.11	3.04
	20	TC	4.81	4.61	4.47	4.33	4.08	3.82	3.56
		SC	3.16	3.09	3.04	2.99	2.91	2.85	2.78
	23	TC	4.97	4.85	4.76	4.67	4.46	4.25	4.04
		SC	2.33	2.28	2.25	2.22	2.16	2.10	2.04
	24	TC	5.02	4.92	4.85	4.78	4.59	4.40	4.20
		SC	2.06	2.03	2.00	1.98	1.92	1.86	1.80

Water Flow Rate = 1.26 m³/hr

Indoor, DB	Indoor, WB	Capacity	Entering Water Temperature, (°C)						
(°C)	(°C)	(kW)	13	20	25	30	35	40	45
27.0	15.5	TC	4.47	4.27	4.14	4.00	3.78	3.56	3.34
		SC	4.37	4.19	4.07	3.94	3.74	3.54	3.33
	17	TC	4.64	4.43	4.28	4.13	3.89	3.64	3.40
		SC	4.01	3.87	3.78	3.68	3.53	3.38	3.24
	19	TC	4.86	4.63	4.47	4.31	4.03	3.76	3.48
		SC	3.52	3.44	3.38	3.32	3.25	3.17	3.10
	20	TC	4.91	4.71	4.57	4.43	4.16	3.90	3.64
		SC	3.23	3.15	3.10	3.05	2.98	2.91	2.84
	23	TC	5.08	4.95	4.86	4.77	4.56	4.34	4.13
		SC	2.38	2.33	2.30	2.27	2.20	2.14	2.08
	24	TC	5.13	5.03	4.96	4.88	4.69	4.49	4.30
		SC	2.11	2.07	2.04	2.02	1.96	1.90	1.84

Note:

1. DB = Dry Bulb, WB = Wet Bulb, TC = Total Capacity, SC = Sensible Capacity
2. All datas above are generated at delta T = Leaving Water Temperature - Entering Water Temperature = 5°C

MWH 020B/BR
Cooling Only/ Cooling Mode (Heatpump)
Water Flow Rate = 0.63 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	5.67	5.42	5.25	5.07	4.80	4.52	4.24
		SC	5.55	5.32	5.16	5.00	4.74	4.49	4.23
	17	TC	5.88	5.62	5.43	5.24	4.93	4.62	4.31
		SC	5.08	4.91	4.79	4.67	4.48	4.29	4.10
	19	TC	6.17	5.88	5.67	5.47	5.12	4.77	4.41
		SC	4.47	4.36	4.29	4.05	4.12	4.03	3.93
	20	TC	6.23	5.98	5.80	5.61	5.28	4.95	4.62
		SC	4.09	4.00	3.93	3.87	3.78	3.69	3.60
	23	TC	6.44	6.28	6.17	6.05	5.78	5.51	5.24
		SC	3.02	2.96	2.92	2.87	2.80	2.72	2.65
	24	TC	6.51	6.38	6.29	6.19	5.95	5.70	5.45
		SC	2.67	2.63	2.59	2.56	2.48	2.41	2.34

Water Flow Rate = 1.05 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	5.93	5.67	5.49	5.31	5.01	4.72	4.43
		SC	5.80	5.56	5.40	5.23	4.96	4.69	4.42
	17	TC	6.15	5.88	5.68	5.48	5.16	4.83	4.51
		SC	5.31	5.14	5.01	4.89	4.69	4.49	4.29
	19	TC	6.45	6.15	5.93	5.72	5.35	4.98	4.61
		SC	4.67	4.56	4.49	4.23	4.31	4.21	4.11
	20	TC	6.52	6.25	6.06	5.87	5.52	5.18	4.83
		SC	4.28	4.18	4.11	4.05	3.95	3.86	3.77
	23	TC	6.74	6.57	6.45	6.33	6.04	5.76	5.48
		SC	3.16	3.10	3.05	3.01	2.92	2.84	2.77
	24	TC	6.81	6.67	6.57	6.48	6.22	5.96	5.70
		SC	2.80	2.75	2.71	2.68	2.60	2.52	2.44

Water Flow Rate = 1.47 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	6.06	5.79	5.61	5.42	5.12	4.82	4.52
		SC	5.92	5.68	5.51	5.34	5.07	4.79	4.52
	17	TC	6.28	6.00	5.80	5.60	5.27	4.94	4.61
		SC	5.43	5.25	5.12	4.99	4.79	4.59	4.39
	19	TC	6.59	6.28	6.06	5.84	5.47	5.09	4.71
		SC	4.77	4.66	4.58	4.32	4.41	4.30	4.20
	20	TC	6.66	6.39	6.19	6.00	5.64	5.29	4.94
		SC	4.37	4.27	4.20	4.13	4.04	3.94	3.85
	23	TC	6.88	6.71	6.59	6.46	6.18	5.89	5.60
		SC	3.23	3.16	3.12	3.07	2.99	2.91	2.83
	24	TC	6.96	6.82	6.72	6.62	6.35	6.09	5.82
		SC	2.86	2.81	2.77	2.73	2.65	2.57	2.50

Note:

1. DB = Dry Bulb, WB = Wet Bulb, TC = Total Capacity, SC = Sensible Capacity
2. All datas above are generated at delta T = Leaving Water Temperature - Entering Water Temperature = 5°C

MWH 025B/BR**Cooling Only/ Cooling Mode (Heatpump)**Water Flow Rate = 1.02 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	7.55	7.23	6.99	6.76	6.39	6.02	5.64
		SC	7.39	7.09	6.87	6.66	6.32	5.98	5.63
	17	TC	7.83	7.49	7.24	6.99	6.57	6.16	5.74
		SC	6.77	6.54	6.38	6.22	5.97	5.72	5.47
	19	TC	8.21	7.83	7.56	7.29	6.82	6.35	5.88
		SC	5.95	5.81	5.72	5.90	5.49	5.36	5.24
	20	TC	8.31	7.97	7.72	7.48	7.04	6.60	6.15
		SC	5.45	5.33	5.24	5.16	5.03	4.91	4.80
	23	TC	8.58	8.37	8.21	8.06	7.70	7.34	6.98
		SC	4.02	3.94	3.89	3.83	3.72	3.62	3.52
	24	TC	8.67	8.50	8.38	8.25	7.92	7.59	7.26
		SC	3.56	3.50	3.46	3.41	3.31	3.21	3.11

Water Flow Rate = 1.70 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	7.90	7.56	7.31	7.07	6.68	6.29	5.90
		SC	7.73	7.41	7.19	6.96	6.61	6.25	5.89
	17	TC	8.19	7.83	7.57	7.31	6.87	6.44	6.01
		SC	7.08	6.84	6.68	6.51	6.24	5.98	5.72
	19	TC	8.59	8.19	7.90	7.62	7.13	6.64	6.15
		SC	6.22	6.08	5.98	6.17	5.74	5.61	5.48
	20	TC	8.68	8.33	8.08	7.82	7.36	6.90	6.44
		SC	5.70	5.57	5.48	5.39	5.26	5.14	5.02
	23	TC	8.97	8.75	8.59	8.43	8.05	7.68	7.30
		SC	4.21	4.12	4.06	4.00	3.89	3.79	3.68
	24	TC	9.07	8.89	8.76	8.63	8.28	7.94	7.59
		SC	3.73	3.66	3.61	3.57	3.46	3.36	3.25

Water Flow Rate = 2.38 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	8.07	7.72	7.47	7.22	6.82	6.43	6.03
		SC	7.89	7.57	7.34	7.11	6.75	6.38	6.02
	17	TC	8.37	8.00	7.73	7.46	7.02	6.58	6.14
		SC	7.23	6.99	6.82	6.65	6.38	6.11	5.84
	19	TC	8.77	8.37	8.08	7.78	7.28	6.78	6.28
		SC	6.36	6.21	6.11	6.31	5.87	5.73	5.60
	20	TC	8.87	8.51	8.25	7.99	7.52	7.05	6.58
		SC	5.83	5.69	5.60	5.51	5.38	5.25	5.13
	23	TC	9.17	8.94	8.77	8.61	8.23	7.84	7.46
		SC	4.30	4.21	4.15	4.09	3.98	3.87	3.76
	24	TC	9.27	9.08	8.95	8.82	8.46	8.11	7.76
		SC	3.81	3.74	3.69	3.64	3.54	3.43	3.32

Note:

1. DB = Dry Bulb, WB = Wet Bulb, TC = Total Capacity, SC = Sensible Capacity
2. All datas above are generated at delta T = Leaving Water Temperature - Entering Water Temperature = 5°C

MWH 030B/BR

Cooling Only/ Cooling Mode (Heatpump)

Water Flow Rate = 1.02 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	8.69	8.32	8.05	7.78	7.35	6.92	6.49
		SC	8.50	8.16	7.91	7.66	7.27	6.88	6.48
	17	TC	9.02	8.62	8.33	8.04	7.56	7.09	6.61
		SC	7.79	7.53	7.35	7.16	6.87	6.58	6.29
	19	TC	9.45	9.01	8.70	8.39	7.85	7.31	6.77
		SC	6.85	6.69	6.58	6.79	6.32	6.17	6.03
	20	TC	9.56	9.17	8.89	8.61	8.10	7.59	7.08
		SC	6.28	6.13	6.03	5.93	5.79	5.66	5.52
	23	TC	9.88	9.63	9.45	9.28	8.86	8.45	8.04
		SC	4.63	4.54	4.47	4.41	4.29	4.17	4.06
	24	TC	9.98	9.78	9.64	9.50	9.12	8.74	8.36
		SC	4.10	4.03	3.98	3.93	3.81	3.69	3.58

Water Flow Rate = 1.70 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	9.09	8.70	8.42	8.14	7.69	7.24	6.79
		SC	8.89	8.53	8.27	8.02	7.60	7.19	6.78
	17	TC	9.43	9.01	8.71	8.41	7.91	7.41	6.91
		SC	8.15	7.88	7.68	7.49	7.19	6.88	6.58
	19	TC	9.88	9.43	9.10	8.77	8.20	7.64	7.07
		SC	7.16	6.99	6.88	7.10	6.61	6.46	6.31
	20	TC	10.00	9.59	9.29	9.00	8.47	7.94	7.41
		SC	6.56	6.41	6.31	6.21	6.06	5.91	5.78
	23	TC	10.33	10.07	9.88	9.70	9.27	8.84	8.41
		SC	4.84	4.75	4.68	4.61	4.48	4.36	4.24
	24	TC	10.44	10.23	10.08	9.93	9.53	9.14	8.74
		SC	4.29	4.21	4.16	4.10	3.98	3.86	3.74

Water Flow Rate = 2.38 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	9.28	8.88	8.60	8.31	7.85	7.40	6.94
		SC	9.08	8.71	8.45	8.19	7.77	7.35	6.93
	17	TC	9.63	9.20	8.90	8.59	8.08	7.57	7.06
		SC	8.32	8.05	7.85	7.65	7.34	7.03	6.72
	19	TC	10.10	9.63	9.29	8.96	8.38	7.80	7.23
		SC	7.31	7.15	7.03	7.26	6.75	6.60	6.44
	20	TC	10.21	9.79	9.50	9.20	8.65	8.11	7.57
		SC	6.71	6.55	6.44	6.34	6.19	6.04	5.90
	23	TC	10.55	10.29	10.10	9.91	9.47	9.03	8.59
		SC	4.95	4.85	4.78	4.71	4.58	4.45	4.33
	24	TC	10.66	10.45	10.30	10.15	9.74	9.33	8.93
		SC	4.38	4.30	4.25	4.19	4.07	3.95	3.83

Note:

1. DB = Dry Bulb, WB = Wet Bulb, TC = Total Capacity, SC = Sensible Capacity
2. All datas above are generated at delta T = Leaving Water Temperature - Entering Water Temperature = 5°C

MWH 040B/BR
Cooling Only/ Cooling Mode (Heatpump)

Water Flow Rate = 1.52 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)					
			13	20	25	30	35	40
27.0	15.5	TC	13.03	12.47	12.07	11.67	11.02	10.38
		SC	12.75	12.23	11.86	11.49	10.90	10.31
	17	TC	13.52	12.92	12.49	12.06	11.34	10.63
		SC	11.68	11.29	11.02	10.74	10.30	9.87
	19	TC	14.17	13.52	13.05	12.58	11.77	10.95
		SC	10.27	10.03	9.87	9.93	9.48	9.26
	20	TC	14.33	13.75	13.33	12.91	12.15	11.38
		SC	9.41	9.20	9.04	8.90	8.68	8.48
	23	TC	14.81	14.44	14.17	13.91	13.29	12.67
		SC	6.94	6.80	6.71	6.61	6.43	6.25
	24	TC	14.97	14.67	14.45	14.24	13.67	13.10
		SC	6.15	6.04	5.96	5.89	5.71	5.54

Water Flow Rate = 2.54 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)					
			13	20	25	30	35	40
27.0	15.5	TC	13.63	13.04	12.62	12.20	11.53	10.85
		SC	13.33	12.79	12.40	12.02	11.40	10.78
	17	TC	14.14	13.51	13.06	12.61	11.86	11.11
		SC	12.22	11.81	11.52	11.23	10.77	10.32
	19	TC	14.82	14.13	13.64	13.15	12.30	11.46
		SC	10.74	10.49	10.32	10.39	9.91	9.68
	20	TC	14.99	14.37	13.94	13.50	12.70	11.90
		SC	9.84	9.62	9.46	9.30	9.08	8.87
	23	TC	15.49	15.10	14.82	14.54	13.90	13.25
		SC	7.26	7.12	7.01	6.91	6.72	6.54
	24	TC	15.65	15.34	15.12	14.89	14.30	13.70
		SC	6.43	6.32	6.23	6.15	5.97	5.79

Water Flow Rate = 3.56 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)					
			13	20	25	30	35	40
27.0	15.5	TC	13.92	13.32	12.89	12.46	11.78	11.09
		SC	13.62	13.07	12.67	12.28	11.65	11.02
	17	TC	14.44	13.80	13.34	12.88	12.12	11.35
		SC	12.48	12.06	11.77	11.48	11.01	10.54
	19	TC	15.14	14.44	13.94	13.43	12.57	11.70
		SC	10.97	10.71	10.54	10.61	10.13	9.89
	20	TC	15.31	14.68	14.24	13.79	12.98	12.16
		SC	10.06	9.82	9.66	9.50	9.28	9.06
	23	TC	15.82	15.42	15.14	14.86	14.20	13.54
		SC	7.42	7.27	7.16	7.06	6.87	6.68
	24	TC	15.99	15.67	15.44	15.21	14.60	13.99
		SC	6.57	6.45	6.37	6.29	6.10	5.92

Note:

1. DB = Dry Bulb, WB = Wet Bulb, TC = Total Capacity, SC = Sensible Capacity
2. All datas above are generated at delta T = Leaving Water Temperature - Entering Water Temperature = 5°C

MWH 050B/BR
Cooling Only/ Cooling Mode (Heatpump)

Water Flow Rate = 1.75 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)					
			13	20	25	30	35	40
27.0	15.5	TC	14.49	13.86	13.42	12.97	12.26	11.54
		SC	14.18	13.60	13.19	12.78	12.12	11.47
	17	TC	15.03	14.36	13.88	13.40	12.61	11.81
		SC	12.99	12.55	12.25	11.94	11.45	10.97
	19	TC	15.76	15.03	14.50	13.98	13.08	12.18
		SC	11.41	11.15	10.97	10.77	10.54	10.29
	20	TC	15.94	15.28	14.82	14.35	13.50	12.66
		SC	10.47	10.22	10.06	9.89	9.66	9.43
	23	TC	16.47	16.05	15.76	15.46	14.78	14.09
		SC	7.72	7.56	7.46	7.35	7.15	6.95
	24	TC	16.64	16.31	16.07	15.83	15.20	14.57
		SC	6.84	6.71	6.63	6.54	6.35	6.16

Water Flow Rate = 2.91 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)					
			13	20	25	30	35	40
27.0	15.5	TC	15.15	14.50	14.03	13.56	12.82	12.07
		SC	14.82	14.22	13.79	13.36	12.67	11.99
	17	TC	15.72	15.02	14.52	14.02	13.19	12.35
		SC	13.58	13.13	12.81	12.49	11.98	11.47
	19	TC	16.48	15.71	15.17	14.62	13.68	12.74
		SC	11.94	11.66	11.47	11.26	11.02	10.76
	20	TC	16.66	15.98	15.49	15.01	14.12	13.23
		SC	10.94	10.69	10.51	10.34	10.10	9.86
	23	TC	17.22	16.79	16.48	16.17	15.45	14.73
		SC	8.07	7.91	7.80	7.68	7.47	7.27
	24	TC	17.40	17.05	16.81	16.56	15.89	15.23
		SC	7.15	7.02	6.93	6.84	6.64	6.44

Water Flow Rate = 4.07 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)					
			13	20	25	30	35	40
27.0	15.5	TC	15.48	14.81	14.33	13.86	13.09	12.33
		SC	15.14	14.53	14.09	13.65	12.95	12.25
	17	TC	16.06	15.34	14.83	14.32	13.47	12.62
		SC	13.88	13.41	13.08	12.76	12.24	11.72
	19	TC	16.83	16.05	15.49	14.94	13.97	13.01
		SC	12.19	11.91	11.72	11.50	11.26	11.00
	20	TC	17.02	16.33	15.83	15.33	14.43	13.52
		SC	11.18	10.92	10.74	10.57	10.31	10.07
	23	TC	17.59	17.15	16.83	16.52	15.78	15.05
		SC	8.25	8.08	7.96	7.85	7.63	7.43
	24	TC	17.78	17.42	17.17	16.91	16.24	15.56
		SC	7.30	7.17	7.08	6.99	6.78	6.58

Note:

1. DB = Dry Bulb, WB = Wet Bulb, TC = Total Capacity, SC = Sensible Capacity
2. All datas above are generated at delta T = Leaving Water Temperature - Entering Water Temperature = 5°C

MWH 060B/BR
Cooling Only/ Cooling Mode (Heatpump)

Water Flow Rate = 2.18 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	18.34	17.55	16.99	16.42	15.52	14.61	13.71
		SC	17.95	17.22	16.70	16.18	15.35	14.52	13.69
	17	TC	19.03	18.18	17.58	16.97	15.96	14.96	13.95
		SC	16.45	15.90	15.51	15.12	14.50	13.89	13.28
	19	TC	19.95	19.02	18.36	17.70	16.56	15.42	14.28
		SC	14.45	14.12	13.89	13.28	13.35	13.03	12.73
	20	TC	20.18	19.35	18.76	18.17	17.10	16.02	14.95
		SC	13.25	12.94	12.73	12.52	12.22	11.94	11.66
	23	TC	20.85	20.32	19.95	19.58	18.71	17.84	16.97
		SC	9.77	9.58	9.44	9.30	9.05	8.80	8.56
	24	TC	21.07	20.65	20.35	20.05	19.24	18.44	17.64
		SC	8.65	8.50	8.39	8.28	8.04	7.80	7.56

Water Flow Rate = 3.63 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	19.18	18.35	17.76	17.17	16.23	15.28	14.33
		SC	18.77	18.00	17.46	16.92	16.05	15.18	14.31
	17	TC	19.90	19.01	18.38	17.75	16.69	15.64	14.59
		SC	17.20	16.62	16.21	15.81	15.16	14.52	13.89
	19	TC	20.86	19.89	19.20	18.51	17.32	16.12	14.93
		SC	15.11	14.76	14.52	13.88	13.96	13.63	13.31
	20	TC	21.10	20.23	19.62	19.00	17.88	16.76	15.63
		SC	13.86	13.53	13.31	13.10	12.78	12.48	12.19
	23	TC	21.80	21.25	20.86	20.47	19.56	18.65	17.74
		SC	10.22	10.02	9.87	9.73	9.46	9.20	8.95
	24	TC	22.03	21.59	21.28	20.96	20.12	19.28	18.44
		SC	9.05	8.89	8.78	8.66	8.41	8.15	7.90

Water Flow Rate = 5.08 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	19.59	18.75	18.15	17.54	16.58	15.61	14.64
		SC	19.17	18.39	17.84	17.28	16.39	15.51	14.62
	17	TC	20.33	19.42	18.78	18.13	17.05	15.98	14.90
		SC	17.57	16.98	16.56	16.15	15.49	14.84	14.19
	19	TC	21.31	20.32	19.62	18.91	17.69	16.47	15.25
		SC	15.44	15.08	14.84	14.18	14.26	13.92	13.60
	20	TC	21.55	20.67	20.04	19.41	18.26	17.12	15.97
		SC	14.15	13.83	13.60	13.38	13.06	12.75	12.45
	23	TC	22.27	21.71	21.31	20.91	19.98	19.05	18.12
		SC	10.44	10.23	10.08	9.94	9.67	9.40	9.14
	24	TC	22.51	22.06	21.74	21.41	20.56	19.70	18.84
		SC	9.24	9.08	8.97	8.85	8.59	8.33	8.07

Note:

1. DB = Dry Bulb, WB = Wet Bulb, TC = Total Capacity, SC = Sensible Capacity
2. All datas above are generated at delta T = Leaving Water Temperature - Entering Water Temperature = 5°C

MWH 070B/BR
Cooling Only/ Cooling Mode (Heatpump)

Water Flow Rate = 2.67 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	22.21	21.25	20.57	19.88	18.79	17.69	16.59
		SC	21.73	20.85	20.22	19.59	18.58	17.57	16.57
	17	TC	23.04	22.01	21.28	20.55	19.33	18.11	16.89
		SC	19.91	19.24	18.77	18.31	17.56	16.82	16.08
	19	TC	24.15	23.03	22.23	21.43	20.05	18.67	17.29
		SC	17.50	17.09	16.81	15.64	16.16	15.78	15.41
	20	TC	24.43	23.43	22.71	22.00	20.70	19.40	18.10
		SC	16.04	15.67	15.41	15.16	14.80	14.45	14.11
	23	TC	25.24	24.61	24.15	23.70	22.65	21.59	20.54
		SC	11.83	11.60	11.43	11.26	10.95	10.65	10.36
	24	TC	25.51	25.00	24.63	24.27	23.30	22.33	21.35
		SC	10.48	10.29	10.16	10.03	9.73	9.44	9.15

Water Flow Rate = 4.45 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	23.22	22.22	21.51	20.79	19.64	18.50	17.35
		SC	22.72	21.80	21.14	20.48	19.43	18.38	17.33
	17	TC	24.09	23.02	22.25	21.48	20.21	18.94	17.66
		SC	20.82	20.12	19.63	19.14	18.36	17.58	16.82
	19	TC	25.26	24.09	23.25	22.41	20.97	19.52	18.08
		SC	18.30	17.87	17.58	16.36	16.90	16.50	16.12
	20	TC	25.54	24.50	23.75	23.00	21.65	20.29	18.93
		SC	16.77	16.39	16.12	15.86	15.48	15.11	14.76
	23	TC	26.39	25.73	25.26	24.78	23.68	22.58	21.48
		SC	12.37	12.13	11.95	11.77	11.45	11.14	10.84
	24	TC	26.67	26.14	25.76	25.38	24.36	23.35	22.33
		SC	10.96	10.76	10.63	10.49	10.18	9.87	9.57

Water Flow Rate = 6.23 m³/hr

Indoor, DB (°C)	Indoor, WB (°C)	Capacity (kW)	Entering Water Temperature, (°C)						
			13	20	25	30	35	40	45
27.0	15.5	TC	23.72	22.70	21.97	21.24	20.07	18.90	17.73
		SC	23.21	22.27	21.60	20.92	19.85	18.77	17.70
	17	TC	24.61	23.52	22.73	21.95	20.65	19.35	18.04
		SC	21.27	20.56	20.05	19.56	18.76	17.96	17.18
	19	TC	25.80	24.61	23.75	22.89	21.42	19.94	18.47
		SC	18.69	18.26	17.96	16.71	17.26	16.86	16.47
	20	TC	26.09	25.03	24.26	23.50	22.11	20.72	19.34
		SC	17.14	16.74	16.47	16.20	15.81	15.44	15.08
	23	TC	26.96	26.29	25.80	25.32	24.19	23.07	21.94
		SC	12.64	12.39	12.21	12.03	11.70	11.38	11.07
	24	TC	27.25	26.71	26.32	25.93	24.89	23.85	22.81
		SC	11.19	11.00	10.85	10.71	10.40	10.08	9.78

Note:

1. DB = Dry Bulb, WB = Wet Bulb, TC = Total Capacity, SC = Sensible Capacity
2. All datas above are generated at delta T = Leaving Water Temperature - Entering Water Temperature = 5°C

MWH 011BR
Heating mode (Heatpump)

Water Flow Rate = 0.36 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	3.00	2.94	2.88	2.85	2.79	2.73	2.65	2.56
12	TC	3.15	3.09	3.03	3.00	2.94	2.88	2.79	2.70
15	TC	3.38	3.32	3.25	3.22	3.16	3.10	3.00	2.91
20	TC	3.75	3.69	3.63	3.60	3.53	3.46	3.35	3.25
25	TC	4.05	3.98	3.91	3.88	3.81	3.73	3.61	3.49
30	TC	4.35	4.28	4.20	4.16	4.09	4.00	3.86	3.72
32	TC	4.47	4.39	4.31	4.28	4.20	4.10	3.96	3.82
35	TC	4.65	4.57	4.49	4.45	4.36	4.26	4.11	3.96

Water Flow Rate = 0.60 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	3.18	3.11	3.05	3.02	2.96	2.90	2.81	2.72
12	TC	3.34	3.27	3.21	3.18	3.11	3.05	2.96	2.86
15	TC	3.58	3.51	3.45	3.41	3.35	3.28	3.18	3.08
20	TC	3.98	3.91	3.84	3.81	3.74	3.67	3.55	3.44
25	TC	4.29	4.22	4.15	4.11	4.04	3.95	3.82	3.69
30	TC	4.61	4.53	4.45	4.41	4.33	4.23	4.09	3.94
32	TC	4.73	4.65	4.57	4.53	4.45	4.35	4.20	4.04
35	TC	4.92	4.84	4.75	4.71	4.62	4.52	4.36	4.20

Water Flow Rate = 0.84 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	3.31	3.24	3.18	3.14	3.08	3.02	2.92	2.83
12	TC	3.48	3.41	3.34	3.31	3.24	3.18	3.08	2.98
15	TC	3.73	3.66	3.59	3.56	3.49	3.42	3.31	3.21
20	TC	4.14	4.07	4.00	3.97	3.90	3.82	3.70	3.58
25	TC	4.47	4.39	4.32	4.28	4.20	4.11	3.98	3.84
30	TC	4.80	4.72	4.63	4.59	4.51	4.41	4.26	4.11
32	TC	4.93	4.85	4.76	4.72	4.63	4.53	4.37	4.21
35	TC	5.13	5.04	4.95	4.90	4.81	4.70	4.54	4.37

Note:

1. TC = Total Capacity, EWT = Entering Water Temperature
2. All datas above are generated at delta T = Entering Water Temperature - Leaving Water Temperature = 5°C

MWH 012BR
Heating mode (Heatpump)

Water Flow Rate = 0.45m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	2.93	2.87	2.81	2.78	2.73	2.67	2.59	2.50
12	TC	3.08	3.02	2.96	2.93	2.87	2.81	2.72	2.64
15	TC	3.30	3.24	3.18	3.15	3.09	3.03	2.93	2.84
20	TC	3.67	3.60	3.54	3.51	3.45	3.38	3.28	3.17
25	TC	3.96	3.89	3.82	3.79	3.72	3.64	3.52	3.40
30	TC	4.25	4.17	4.10	4.06	3.99	3.90	3.77	3.64
32	TC	4.36	4.29	4.21	4.17	4.10	4.01	3.87	3.73
35	TC	4.54	4.46	4.38	4.34	4.26	4.16	4.02	3.87

Water Flow Rate = 0.75 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	3.10	3.04	2.98	2.95	2.89	2.83	2.74	2.65
12	TC	3.26	3.20	3.13	3.10	3.04	2.98	2.89	2.79
15	TC	3.49	3.43	3.37	3.33	3.27	3.20	3.10	3.00
20	TC	3.88	3.82	3.75	3.72	3.66	3.58	3.47	3.36
25	TC	4.19	4.12	4.05	4.01	3.94	3.86	3.73	3.60
30	TC	4.50	4.42	4.34	4.30	4.23	4.13	3.99	3.85
32	TC	4.62	4.54	4.46	4.42	4.34	4.24	4.10	3.95
35	TC	4.81	4.72	4.64	4.60	4.51	4.41	4.25	4.10

Water Flow Rate = 1.05 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	3.23	3.17	3.10	3.07	3.01	2.95	2.85	2.76
12	TC	3.39	3.33	3.26	3.23	3.17	3.10	3.01	2.91
15	TC	3.64	3.57	3.51	3.47	3.41	3.34	3.23	3.13
20	TC	4.04	3.98	3.91	3.88	3.81	3.73	3.61	3.50
25	TC	4.37	4.29	4.22	4.18	4.11	4.02	3.89	3.75
30	TC	4.69	4.61	4.52	4.48	4.40	4.30	4.16	4.01
32	TC	4.81	4.73	4.65	4.61	4.52	4.42	4.27	4.11
35	TC	5.01	4.92	4.83	4.79	4.70	4.59	4.43	4.27

Note:

1. TC = Total Capacity, EWT = Entering Water Temperature
2. All datas above are generated at delta T = Entering Water Temperature - Leaving Water Temperature = 5°C

MWH 015BR
Heating mode (Heatpump)

Water Flow Rate = 0.54 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	3.42	3.35	3.28	3.25	3.18	3.11	3.02	2.92
12	TC	3.59	3.52	3.45	3.42	3.35	3.28	3.18	3.08
15	TC	3.85	3.78	3.71	3.67	3.60	3.53	3.42	3.31
20	TC	4.28	4.21	4.13	4.10	4.03	3.94	3.82	3.70
25	TC	4.62	4.54	4.46	4.42	4.34	4.25	4.11	3.97
30	TC	4.96	4.87	4.78	4.74	4.66	4.55	4.40	4.24
32	TC	5.09	5.00	4.91	4.87	4.78	4.67	4.51	4.35
35	TC	5.30	5.20	5.11	5.06	4.97	4.86	4.69	4.51

Water Flow Rate = 0.90 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	3.62	3.55	3.47	3.44	3.37	3.30	3.20	3.09
12	TC	3.80	3.73	3.66	3.62	3.55	3.47	3.37	3.26
15	TC	4.07	4.00	3.93	3.89	3.82	3.74	3.62	3.50
20	TC	4.53	4.45	4.38	4.34	4.26	4.18	4.05	3.92
25	TC	4.89	4.81	4.72	4.68	4.60	4.50	4.35	4.20
30	TC	5.25	5.16	5.07	5.02	4.93	4.82	4.66	4.49
32	TC	5.39	5.30	5.20	5.16	5.06	4.95	4.78	4.61
35	TC	5.61	5.51	5.41	5.36	5.26	5.14	4.96	4.78

Water Flow Rate = 1.26 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	3.77	3.69	3.62	3.58	3.51	3.44	3.33	3.22
12	TC	3.96	3.88	3.81	3.77	3.69	3.62	3.51	3.39
15	TC	4.24	4.17	4.09	4.05	3.97	3.89	3.77	3.65
20	TC	4.72	4.64	4.56	4.52	4.44	4.35	4.22	4.08
25	TC	5.09	5.01	4.92	4.88	4.79	4.69	4.53	4.38
30	TC	5.47	5.37	5.28	5.23	5.14	5.02	4.85	4.68
32	TC	5.62	5.52	5.42	5.37	5.28	5.16	4.98	4.80
35	TC	5.84	5.74	5.64	5.59	5.48	5.36	5.17	4.98

Note:

1. TC = Total Capacity, EWT = Entering Water Temperature
2. All datas above are generated at delta T = Entering Water Temperature - Leaving Water Temperature = 5°C

MWH 020BR
Heating mode (Heatpump)

Water Flow Rate = 0.63 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	3.92	3.84	3.76	3.73	3.65	3.57	3.46	3.35
12	TC	4.12	4.04	3.96	3.92	3.84	3.76	3.65	3.53
15	TC	4.41	4.33	4.25	4.21	4.13	4.05	3.92	3.80
20	TC	4.91	4.83	4.74	4.70	4.62	4.53	4.38	4.24
25	TC	5.30	5.21	5.12	5.07	4.98	4.87	4.72	4.56
30	TC	5.69	5.59	5.49	5.44	5.34	5.22	5.05	4.87
32	TC	5.84	5.74	5.64	5.59	5.49	5.36	5.18	4.99
35	TC	6.08	5.97	5.86	5.81	5.70	5.57	5.38	5.18

Water Flow Rate = 1.05 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	4.15	4.07	3.99	3.95	3.86	3.79	3.67	3.55
12	TC	4.36	4.28	4.19	4.15	4.07	3.99	3.86	3.74
15	TC	4.67	4.59	4.51	4.46	4.38	4.29	4.16	4.02
20	TC	5.20	5.11	5.02	4.98	4.89	4.79	4.64	4.49
25	TC	5.61	5.51	5.42	5.37	5.28	5.16	4.99	4.82
30	TC	6.02	5.92	5.81	5.76	5.66	5.53	5.34	5.15
32	TC	6.19	6.08	5.97	5.92	5.81	5.68	5.48	5.29
35	TC	6.43	6.32	6.21	6.15	6.04	5.90	5.69	5.48

Water Flow Rate = 1.47 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	4.32	4.24	4.15	4.11	4.02	3.94	3.82	3.70
12	TC	4.54	4.46	4.37	4.33	4.24	4.15	4.02	3.89
15	TC	4.87	4.78	4.69	4.65	4.56	4.47	4.33	4.19
20	TC	5.41	5.32	5.23	5.19	5.10	4.99	4.84	4.68
25	TC	5.84	5.74	5.64	5.60	5.50	5.38	5.20	5.03
30	TC	6.27	6.17	6.06	6.00	5.89	5.76	5.57	5.37
32	TC	6.45	6.33	6.22	6.17	6.05	5.92	5.71	5.51
35	TC	6.70	6.59	6.47	6.41	6.29	6.15	5.93	5.71

Note:

1. TC = Total Capacity, EWT = Entering Water Temperature
2. All datas above are generated at delta T = Entering Water Temperature - Leaving Water Temperature = 5°C

MWH 025BR
Heating mode (Heatpump)

Water Flow Rate = 1.02 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	6.64	6.51	6.38	6.31	6.18	6.06	5.87	5.68
12	TC	6.98	6.85	6.71	6.65	6.51	6.38	6.18	5.98
15	TC	7.48	7.35	7.21	7.14	7.01	6.86	6.65	6.44
20	TC	8.32	8.18	8.04	7.97	7.83	7.67	7.43	7.19
25	TC	8.98	8.82	8.67	8.60	8.44	8.26	7.99	7.72
30	TC	9.64	9.47	9.30	9.22	9.05	8.85	8.55	8.25
32	TC	9.90	9.73	9.56	9.47	9.30	9.09	8.78	8.46
35	TC	10.30	10.12	9.94	9.85	9.67	9.44	9.11	8.78

Water Flow Rate = 1.70 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	7.04	6.90	6.76	6.69	6.55	6.42	6.22	6.02
12	TC	7.39	7.25	7.11	7.04	6.90	6.76	6.55	6.34
15	TC	7.92	7.78	7.64	7.56	7.42	7.27	7.04	6.82
20	TC	8.81	8.66	8.51	8.44	8.29	8.12	7.87	7.62
25	TC	9.51	9.35	9.18	9.10	8.94	8.75	8.46	8.18
30	TC	10.21	10.03	9.85	9.77	9.59	9.38	9.06	8.74
32	TC	10.49	10.30	10.12	10.03	9.85	9.63	9.29	8.96
35	TC	10.91	10.71	10.52	10.43	10.24	10.00	9.65	9.30

Water Flow Rate = 2.38 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	7.33	7.18	7.04	6.97	6.82	6.68	6.47	6.27
12	TC	7.70	7.55	7.40	7.33	7.18	7.04	6.82	6.60
15	TC	8.25	8.10	7.95	7.88	7.73	7.57	7.34	7.10
20	TC	9.18	9.02	8.87	8.79	8.64	8.46	8.20	7.93
25	TC	9.90	9.74	9.57	9.48	9.31	9.11	8.82	8.52
30	TC	10.63	10.45	10.26	10.17	9.99	9.77	9.43	9.10
32	TC	10.92	10.73	10.54	10.45	10.26	10.03	9.68	9.33
35	TC	11.36	11.16	10.96	10.86	10.66	10.42	10.05	9.68

Note:

1. TC = Total Capacity, EWT = Entering Water Temperature
2. All datas above are generated at delta T = Entering Water Temperature - Leaving Water Temperature = 5°C

MWH 030BR
Heating mode (Heatpump)

Water Flow Rate = 1.02 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	7.48	7.33	7.18	7.11	6.96	6.82	6.61	6.39
12	TC	7.85	7.71	7.56	7.48	7.33	7.18	6.96	6.73
15	TC	8.42	8.27	8.12	8.04	7.89	7.73	7.49	7.24
20	TC	9.36	9.21	9.05	8.97	8.81	8.63	8.36	8.09
25	TC	10.11	9.93	9.76	9.67	9.50	9.30	8.99	8.69
30	TC	10.85	10.66	10.47	10.38	10.19	9.97	9.63	9.28
32	TC	11.15	10.95	10.76	10.66	10.47	10.23	9.88	9.52
35	TC	11.59	11.39	11.19	11.08	10.88	10.63	10.26	9.88

Water Flow Rate = 1.70 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	7.92	7.76	7.61	7.53	7.37	7.22	7.00	6.77
12	TC	8.32	8.16	8.00	7.92	7.76	7.61	7.37	7.13
15	TC	8.92	8.76	8.59	8.51	8.35	8.18	7.93	7.67
20	TC	9.91	9.75	9.58	9.50	9.33	9.14	8.86	8.57
25	TC	10.70	10.52	10.34	10.25	10.06	9.85	9.53	9.20
30	TC	11.49	11.29	11.09	10.99	10.79	10.55	10.19	9.83
32	TC	11.80	11.60	11.39	11.29	11.09	10.84	10.46	10.08
35	TC	12.27	12.06	11.85	11.74	11.52	11.26	10.86	10.46

Water Flow Rate = 2.38 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	8.25	8.09	7.92	7.84	7.68	7.52	7.29	7.05
12	TC	8.67	8.50	8.33	8.25	8.09	7.92	7.68	7.43
15	TC	9.29	9.12	8.95	8.87	8.70	8.52	8.26	7.99
20	TC	10.33	10.16	9.98	9.90	9.72	9.53	9.23	8.93
25	TC	11.15	10.96	10.77	10.67	10.48	10.26	9.92	9.59
30	TC	11.97	11.76	11.55	11.45	11.24	10.99	10.62	10.24
32	TC	12.30	12.08	11.87	11.76	11.55	11.29	10.90	10.51
35	TC	12.79	12.56	12.34	12.23	12.00	11.73	11.31	10.90

Note:

1. TC = Total Capacity, EWT = Entering Water Temperature
2. All datas above are generated at delta T = Entering Water Temperature - Leaving Water Temperature = 5°C

MWH 040BR
Heating mode (Heatpump)

Water Flow Rate = 1.52 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	12.20	11.96	11.72	11.60	11.36	11.12	10.78	10.43
12	TC	12.82	12.57	12.33	12.20	11.96	11.72	11.35	10.99
15	TC	13.74	13.49	13.24	13.12	12.87	12.61	12.21	11.82
20	TC	15.28	15.02	14.76	14.64	14.38	14.09	13.65	13.21
25	TC	16.49	16.21	15.93	15.79	15.50	15.17	14.68	14.18
30	TC	17.70	17.39	17.09	16.93	16.63	16.26	15.70	15.15
32	TC	18.18	17.87	17.55	17.39	17.08	16.69	16.12	15.54
35	TC	18.91	18.58	18.25	18.08	17.75	17.34	16.73	16.12

Water Flow Rate = 2.54m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	12.92	12.67	12.41	12.28	12.03	11.78	11.42	11.05
12	TC	13.57	13.31	13.05	12.92	12.67	12.41	12.02	11.64
15	TC	14.55	14.29	14.02	13.89	13.63	13.35	12.93	12.52
20	TC	16.18	15.91	15.64	15.50	15.23	14.92	14.45	13.99
25	TC	17.46	17.16	16.87	16.72	16.42	16.07	15.54	15.01
30	TC	18.74	18.42	18.10	17.93	17.61	17.22	16.63	16.04
32	TC	19.26	18.92	18.59	18.42	18.09	17.68	17.07	16.45
35	TC	20.03	19.68	19.33	19.15	18.80	18.37	17.72	17.07

Water Flow Rate = 3.56 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	13.46	13.19	12.93	12.79	12.53	12.27	11.89	11.51
12	TC	14.14	13.87	13.60	13.46	13.19	12.93	12.52	12.12
15	TC	15.16	14.88	14.61	14.47	14.20	13.91	13.47	13.04
20	TC	16.85	16.57	16.29	16.15	15.86	15.54	15.06	14.57
25	TC	18.19	17.88	17.57	17.41	17.10	16.74	16.19	15.64
30	TC	19.53	19.19	18.85	18.68	18.34	17.94	17.32	16.71
32	TC	20.06	19.71	19.36	19.19	18.84	18.42	17.78	17.14
35	TC	20.86	20.50	20.13	19.95	19.59	19.13	18.46	17.78

Note:

1. TC = Total Capacity, EWT = Entering Water Temperature
2. All datas above are generated at delta T = Entering Water Temperature - Leaving Water Temperature = 5°C

MWH 050BR
Heating mode (Heatpump)

Water Flow Rate = 1.75m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	13.38	13.12	12.85	12.72	12.45	12.20	11.82	11.44
12	TC	14.06	13.79	13.52	13.39	13.12	12.85	12.45	12.05
15	TC	15.07	14.79	14.52	14.39	14.11	13.83	13.39	12.96
20	TC	16.75	16.47	16.19	16.05	15.77	15.45	14.97	14.49
25	TC	18.08	17.77	17.47	17.31	17.01	16.64	16.10	15.55
30	TC	19.41	19.08	18.74	18.57	18.24	17.83	17.22	16.61
32	TC	19.94	19.60	19.25	19.08	18.73	18.31	17.67	17.04
35	TC	20.74	20.38	20.02	19.83	19.47	19.02	18.35	17.68

Water Flow Rate = 2.91 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	14.17	13.89	13.61	13.47	13.19	12.92	12.52	12.12
12	TC	14.89	14.60	14.32	14.18	13.89	13.61	13.19	12.76
15	TC	15.96	15.67	15.38	15.23	14.95	14.64	14.19	13.73
20	TC	17.74	17.45	17.15	17.00	16.70	16.36	15.85	15.34
25	TC	19.15	18.82	18.50	18.33	18.01	17.62	17.05	16.47
30	TC	20.56	20.20	19.85	19.67	19.31	18.88	18.24	17.60
32	TC	21.12	20.75	20.39	20.20	19.84	19.39	18.72	18.05
35	TC	21.97	21.58	21.20	21.00	20.62	20.15	19.43	18.72

Water Flow Rate = 4.07 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	14.76	14.47	14.18	14.03	13.74	13.46	13.04	12.62
12	TC	15.51	15.21	14.91	14.77	14.47	14.18	13.74	13.29
15	TC	16.62	16.32	16.02	15.87	15.57	15.25	14.78	14.30
20	TC	18.48	18.17	17.86	17.71	17.40	17.04	16.51	15.98
25	TC	19.95	19.61	19.27	19.10	18.76	18.36	17.76	17.15
30	TC	21.42	21.05	20.68	20.49	20.12	19.67	19.00	18.33
32	TC	22.00	21.62	21.24	21.05	20.66	20.20	19.50	18.80
35	TC	22.88	22.48	22.08	21.88	21.48	20.99	20.25	19.50

Note:

1. TC = Total Capacity, EWT = Entering Water Temperature
2. All datas above are generated at delta T = Entering Water Temperature - Leaving Water Temperature = 5°C

MWH 060BR
Heating mode (Heatpump)

Water Flow Rate = 2.18 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	16.14	15.82	15.50	15.34	15.02	14.71	14.26	13.80
12	TC	16.95	16.63	16.30	16.14	15.82	15.50	15.01	14.53
15	TC	18.17	17.84	17.51	17.35	17.02	16.67	16.15	15.63
20	TC	20.20	19.86	19.53	19.36	19.02	18.63	18.05	17.47
25	TC	21.81	21.43	21.06	20.88	20.51	20.07	19.41	18.75
30	TC	23.41	23.00	22.60	22.40	21.99	21.50	20.77	20.04
32	TC	24.05	23.63	23.21	23.01	22.59	22.08	21.31	20.55
35	TC	25.01	24.57	24.14	23.92	23.48	22.94	22.13	21.32

Water Flow Rate = 3.63 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	17.09	16.75	16.41	16.24	15.90	15.58	15.10	14.61
12	TC	17.95	17.61	17.27	17.09	16.75	16.41	15.90	15.39
15	TC	19.24	18.89	18.55	18.37	18.02	17.66	17.11	16.56
20	TC	21.39	21.04	20.68	20.50	20.14	19.73	19.11	18.50
25	TC	23.09	22.70	22.31	22.11	21.72	21.25	20.56	19.86
30	TC	24.79	24.36	23.93	23.72	23.29	22.77	22.00	21.22
32	TC	25.47	25.03	24.58	24.36	23.92	23.38	22.57	21.76
35	TC	26.49	26.02	25.56	25.33	24.87	24.29	23.44	22.58

Water Flow Rate = 5.08 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	17.80	17.45	17.10	16.92	16.57	16.23	15.73	15.22
12	TC	18.70	18.34	17.99	17.81	17.45	17.10	16.56	16.03
15	TC	20.04	19.68	19.32	19.14	18.77	18.39	17.82	17.25
20	TC	22.29	21.91	21.54	21.36	20.98	20.55	19.91	19.27
25	TC	24.06	23.65	23.24	23.03	22.62	22.14	21.41	20.69
30	TC	25.82	25.38	24.93	24.71	24.26	23.72	22.91	22.10
32	TC	26.53	26.07	25.61	25.38	24.92	24.36	23.51	22.67
35	TC	27.59	27.11	26.63	26.39	25.90	25.31	24.41	23.52

Note:

1. TC = Total Capacity, EWT = Entering Water Temperature
2. All datas above are generated at delta T = Entering Water Temperature - Leaving Water Temperature = 5°C

MWH 070BR
Heating mode (Heatpump)

Water Flow Rate = 2.67 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	18.10	17.75	17.39	17.21	16.85	16.51	15.99	15.48
12	TC	19.02	18.65	18.29	18.11	17.75	17.39	16.85	16.30
15	TC	20.39	20.02	19.65	19.46	19.09	18.71	18.12	17.54
20	TC	22.67	22.29	21.91	21.72	21.34	20.90	20.25	19.60
25	TC	24.46	24.05	23.63	23.42	23.01	22.51	21.78	21.04
30	TC	26.26	25.81	25.36	25.13	24.68	24.13	23.30	22.48
32	TC	26.98	26.51	26.05	25.81	25.34	24.77	23.91	23.06
35	TC	28.06	27.57	27.08	26.83	26.34	25.74	24.83	23.92

Water Flow Rate = 4.45 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	19.17	18.79	18.41	18.22	17.84	17.48	16.94	16.40
12	TC	20.14	19.76	19.37	19.18	18.79	18.41	17.84	17.27
15	TC	21.59	21.20	20.81	20.61	20.22	19.81	19.19	18.57
20	TC	24.00	23.60	23.20	23.00	22.60	22.14	21.45	20.75
25	TC	25.91	25.47	25.03	24.81	24.36	23.84	23.06	22.28
30	TC	27.81	27.33	26.85	26.61	26.13	25.55	24.68	23.81
32	TC	28.58	28.08	27.58	27.33	26.84	26.23	25.32	24.42
35	TC	29.72	29.20	28.68	28.42	27.90	27.26	26.29	25.33

Water Flow Rate = 6.23 m³/hr

EWT (°C)	Capacity (kW)	INDOOR DB (°C)							
		15	17	19	20	22	24	27	30
10	TC	19.97	19.58	19.18	18.98	18.59	18.21	17.64	17.08
12	TC	20.98	20.58	20.18	19.98	19.58	19.18	18.58	17.99
15	TC	22.49	22.08	21.68	21.47	21.06	20.64	19.99	19.35
20	TC	25.01	24.59	24.17	23.96	23.54	23.06	22.34	21.62
25	TC	26.99	26.53	26.07	25.84	25.38	24.84	24.02	23.21
30	TC	28.97	28.47	27.97	27.72	27.22	26.62	25.71	24.80
32	TC	29.77	29.25	28.73	28.47	27.96	27.33	26.38	25.43
35	TC	30.96	30.42	29.87	29.60	29.06	28.39	27.39	26.39

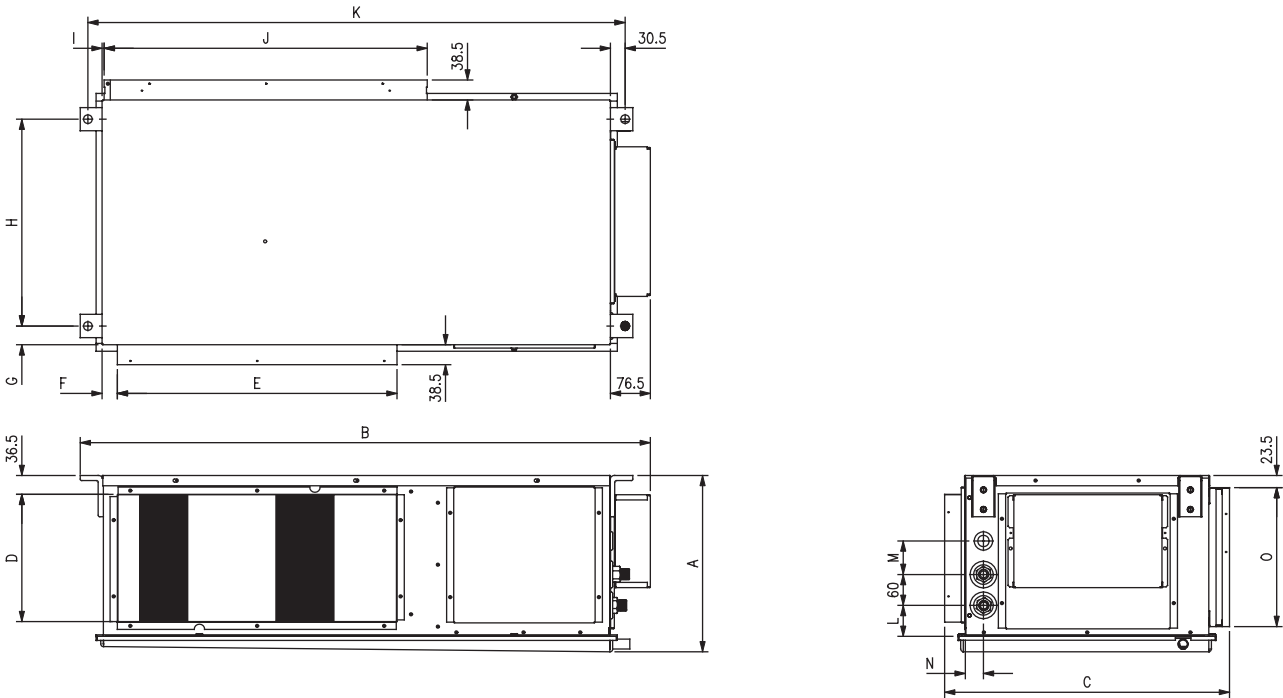
Note:

1. TC = Total Capacity, EWT = Entering Water Temperature
2. All datas above are generated at delta T = Entering Water Temperature - Leaving Water Temperature = 5°C

Dimensional Data

Outlines And Dimensions

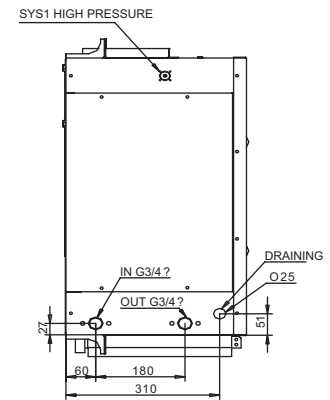
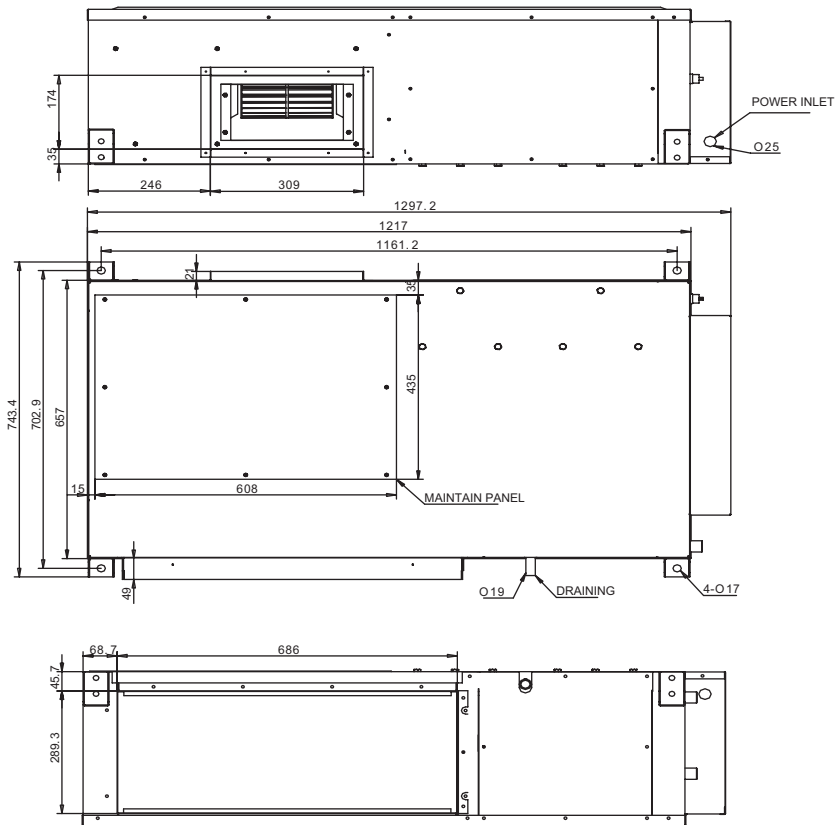
Model : MWH 011/012/015/020/025 B/BR



Dimension in mm

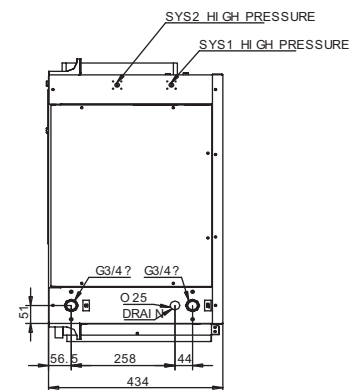
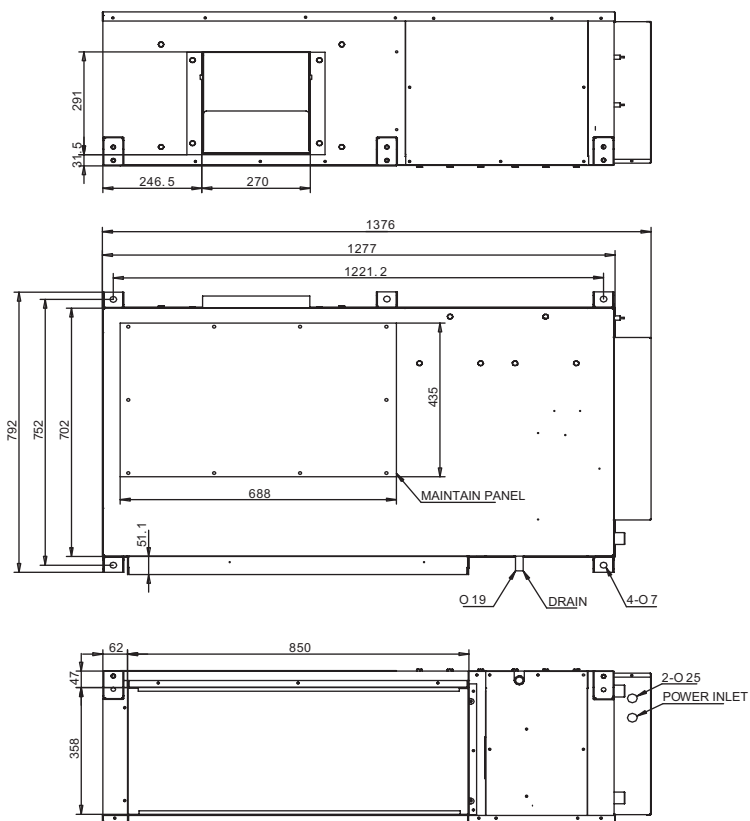
Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
MWH011B/BR	250.0	1084.0	547.0	174.0	502.0	28.5	36.5	396.0	3.0	586.0	1026.0	32.0	40.0	29.0	195.5
MWH012B/BR	325.0	1072.0	552.0	248.0	542.0	29.5	36.5	401.0	4.0	626.0	1046.0	60.0	65.0	35.0	269.5
MWH015B/BR	337.0	1072.0	552.0	248.0	542.0	29.5	36.5	401.0	4.0	626.0	1045.0	60.0	65.0	35.0	269.5
MWH020B/BR	353.0	1152.0	592.0	263.0	642.0	29.5	38.5	437.0	4.0	726.0	1155.0	100.0	65.0	45.0	284.5
MWH025B/BR	340.0	1327.0	592.0	263.0	642.0	29.5	38.5	437.0	3.5	726.0	1300.0	62.0	59.0	59.0	284.5

Model : MWH 030 B/BR



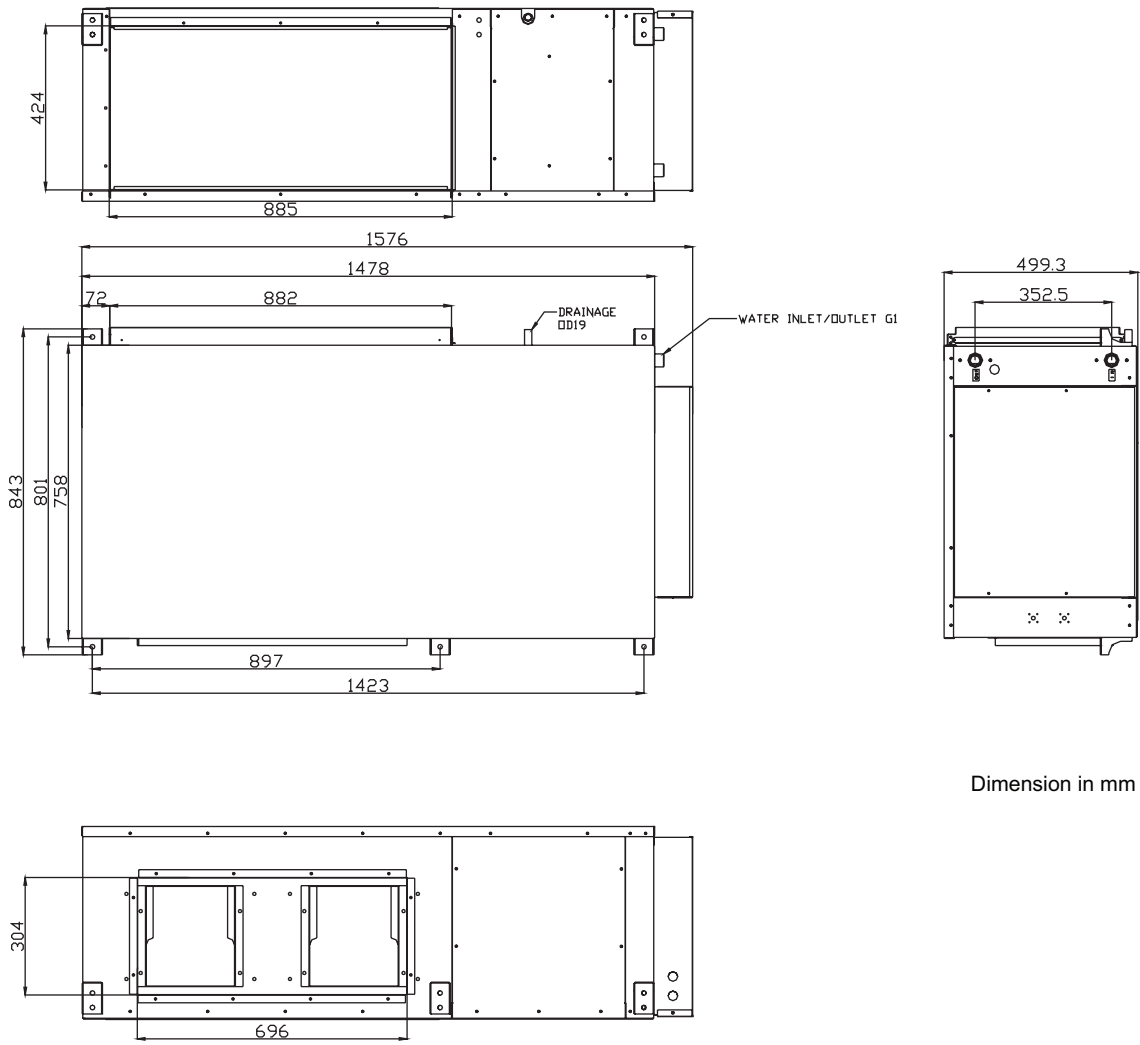
Dimension in mm

Model : MWH 040/050 B/BR



Dimension in mm

Model : MWH 060/070 B/BR



Dimension in mm

Electrical Data

Electrical Data - Cooling Only (R22)

MODEL			MWH 011B	MWH 012B
EVAPORATOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	90	83
	RATED RUNNING CURRENT	A	0.43	0.37
	MOTOR OUTPUT	W	60	36
	POLES		4	
COMPRESSOR	INSULATION GRADE		CLASS E	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	µF	30.0	25.0
	RATED INPUT POWER	W	700	692
	RATED RUNNING CURRENT	A	3.1	
	LOCKED ROTOR AMP.	A	19	18

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 13256-1.

MODEL			MWH 015B	MWH 020B
EVAPORATOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	102	211
	RATED RUNNING CURRENT	A	0.45	0.92
	MOTOR OUTPUT	W	51	120
	POLES		4	
COMPRESSOR	INSULATION GRADE		CLASS E	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	µF	40.0	45.0
	RATED INPUT POWER	W	1151	1350
	RATED RUNNING CURRENT	A	5.5	6.1
	LOCKED ROTOR AMP.	A	32	35

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 13256-1.

Electrical Data - Cooling Only (R22)

MODEL			MWH 025B	
EVAPORATOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	317	
	RATED RUNNING CURRENT	A	1.42	
	MOTOR OUTPUT	W	200	
	POLES		4	
COMPRESSOR	INSULATION GRADE		CLASS E	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	µF	25.0	
	RATED INPUT POWER	W	1577	
	RATED RUNNING CURRENT	A	7.5	
	LOCKED ROTOR AMP.	A	22x2	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 13256-1.

MODEL			MWH 030B	MWH 040B
EVAPORATOR MOTOR	INSULATION GRADE		CLASS B	CLASS F
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	450	900
	RATED RUNNING CURRENT	A	1.90	3.70
	MOTOR OUTPUT	W	425	830
	POLES		4	
COMPRESSOR	INSULATION GRADE		N/A	CLASS E
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	µF	60.0	50.0
	RATED INPUT POWER	W	2035	2997
	RATED RUNNING CURRENT	A	10.0	14.9
	LOCKED ROTOR AMP.	A	28	42

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 320.

Electrical Data - Cooling Only (R22)

MODEL			MWH 050B	MWH 060B
EVAPORATOR MOTOR	INSULATION GRADE		CLASS F	CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	380 - 415 / 3 / 50
	RATED INPUT POWER	W	950	600x2
	RATED RUNNING CURRENT	A	3.90	5.10
	MOTOR OUTPUT	W	880	375x2
	POLES		4	
COMPRESSOR	INSULATION GRADE		CLASS E	N/A
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	380 - 415 / 3 / 50
	CAPACITOR	µF	50.0	N/A
	RATED INPUT POWER	W	3532	4305
	RATED RUNNING CURRENT	A	17.7	8.2
	LOCKED ROTOR AMP.	A	48	40

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 320.

MODEL			MWH 070B
EVAPORATOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	380 - 415 / 3 / 50
	RATED INPUT POWER	W	650x2
	RATED RUNNING CURRENT	A	5.4
	MOTOR OUTPUT	W	400x2
	POLES		4
COMPRESSOR	INSULATION GRADE		N/A
	POWER SOURCE	V/Ph/Hz	380 - 415 / 3 / 50
	CAPACITOR	µF	N/A
	RATED INPUT POWER	W	4741
	RATED RUNNING CURRENT	A	9.4
	LOCKED ROTOR AMP.	A	46

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 320.

Electrical Data - Heatpump (R22)

MODEL			MWH 011BR	MWH 012BR
EVAPORATOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	90	83
	RATED RUNNING CURRENT	A	0.43	0.37
	MOTOR OUTPUT	W	60	36
	POLES		4	
COMPRESSOR	INSULATION GRADE		CLASS E	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	µF	30.0	25.0
	RATED INPUT POWER (COOLING)	W	700	692
	RATED INPUT POWER (HEATING)	W	655	712
	RATED RUNNING CURRENT (COOLING)	A	3.1	3.1
	RATED RUNNING CURRENT (HEATING)	A	2.9	3.2
	LOCKED ROTOR AMP.	A	19	18

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 13256-1.

MODEL			MWH 015BR	MWH 020BR
EVAPORATOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	102	211
	RATED RUNNING CURRENT	A	0.45	0.92
	MOTOR OUTPUT	W	51	120
	POLES		4	
COMPRESSOR	INSULATION GRADE		CLASS E	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	µF	40.0	45.0
	RATED INPUT POWER (COOLING)	W	1151	1450
	RATED INPUT POWER (HEATING)	W	1051	1150
	RATED RUNNING CURRENT (COOLING)	A	5.5	6.5
	RATED RUNNING CURRENT (HEATING)	A	5.1	5.2
	LOCKED ROTOR AMP.	A	32	35

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 13256-1.

Electrical Data - Heatpump (R22)

MODEL			MWH 025BR	
EVAPORATOR MOTOR	INSULATION GRADE		CLASS B	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	317	
	RATED RUNNING CURRENT	A	1.42	
	MOTOR OUTPUT	W	200	
	POLES		4	
COMPRESSOR	INSULATION GRADE		CLASS E	
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	µF	25.0	
	RATED INPUT POWER (COOLING)	W	1577	
	RATED INPUT POWER (HEATING)	W	1637	
	RATED RUNNING CURRENT (COOLING)	A	7.5	
	RATED RUNNING CURRENT (HEATING)	A	8.0	
	LOCKED ROTOR AMP.	A	22x2	

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ISO 13256-1.

MODEL			MWH 030BR	MWH 040BR
EVAPORATOR MOTOR	INSULATION GRADE		CLASS B	CLASS F
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	RATED INPUT POWER	W	450	900
	RATED RUNNING CURRENT	A	1.90	3.70
	MOTOR OUTPUT	W	425	830
	POLES		4	
COMPRESSOR	INSULATION GRADE		N/A	CLASS E
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	
	CAPACITOR	µF	60.0	50.0
	RATED INPUT POWER (COOLING)	W	2035	2997
	RATED INPUT POWER (HEATING)	W	2083	3095
	RATED RUNNING CURRENT (COOLING)	A	10.0	14.4
	RATED RUNNING CURRENT (HEATING)	A	10.2	15.0
	LOCKED ROTOR AMP.	A	28	42

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 320.

Electrical Data - Heatpump (R22)

MODEL			MWH 050BR	MWH 060BR
EVAPORATOR MOTOR	INSULATION GRADE		CLASS F	CLASS B
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	380 - 415 / 3 / 50
	RATED INPUT POWER	W	950	600x2
	RATED RUNNING CURRENT	A	3.90	5.10
	MOTOR OUTPUT	W	880	375x2
	POLES		4	
COMPRESSOR	INSULATION GRADE		CLASS E	N/A
	POWER SOURCE	V/Ph/Hz	220 - 240 / 1 / 50	380 - 415 / 3 / 50
	CAPACITOR	µF	50.0	N/A
	RATED INPUT POWER (COOLING)	W		4305
	RATED INPUT POWER (HEATING)	W	3483	4646
	RATED RUNNING CURRENT (COOLING)	A	17.7	8.3
	RATED RUNNING CURRENT (HEATING)	A	17.3	8.8
	LOCKED ROTOR AMP.	A	48	40

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 320.

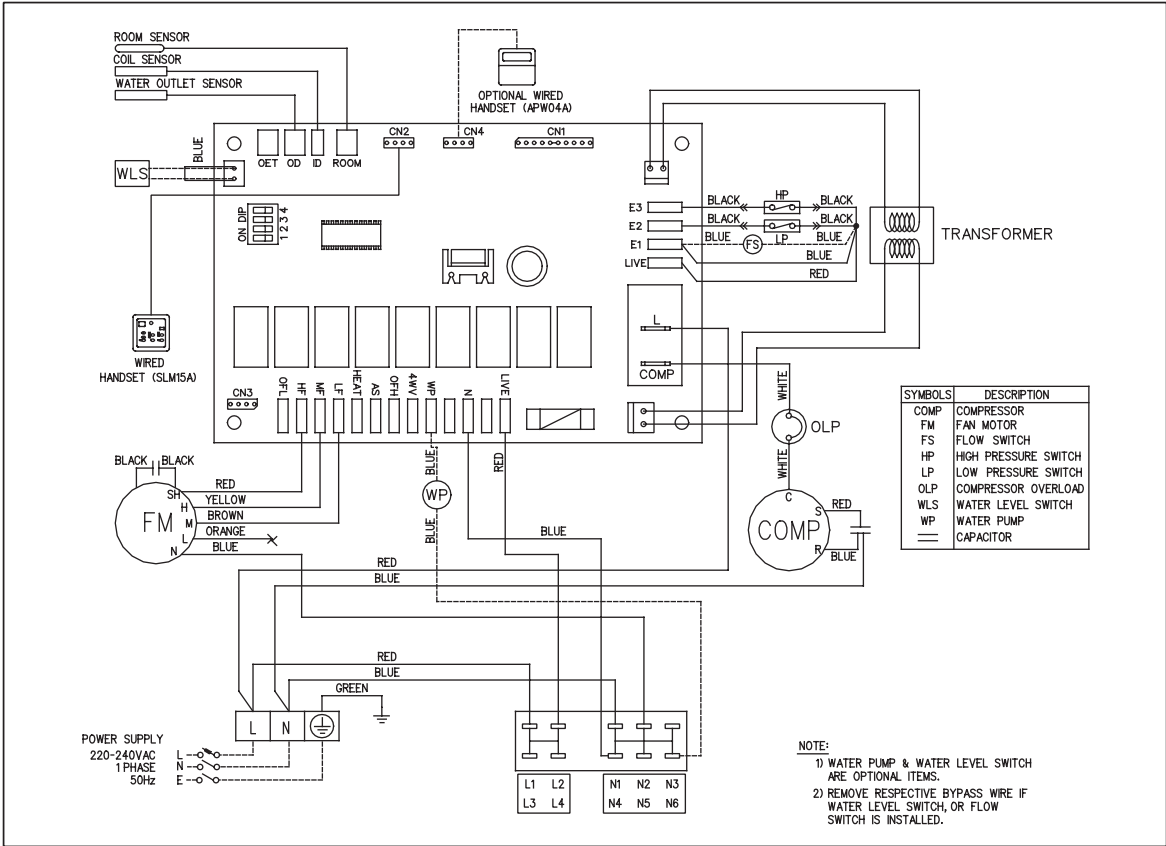
MODEL			MWH 070BR
EVAPORATOR MOTOR	INSULATION GRADE		CLASS B
	POWER SOURCE	V/Ph/Hz	380 - 415 / 3 / 50
	RATED INPUT POWER	W	650x2
	RATED RUNNING CURRENT	A	5.4
	MOTOR OUTPUT	W	400x2
	POLES		4
COMPRESSOR	INSULATION GRADE		N/A
	POWER SOURCE	V/Ph/Hz	380 - 415 / 3 / 50
	CAPACITOR	µF	N/A
	RATED INPUT POWER (COOLING)	W	4741
	RATED INPUT POWER (HEATING)	W	4936
	RATED RUNNING CURRENT (COOLING)	A	9.4
	RATED RUNNING CURRENT (HEATING)	A	9.8
	LOCKED ROTOR AMP.	A	46

1) ALL SPECIFICATIONS ARE SUBJECTED TO CHANGE BY THE MANUFACTURER WITHOUT PRIOR NOTICE.

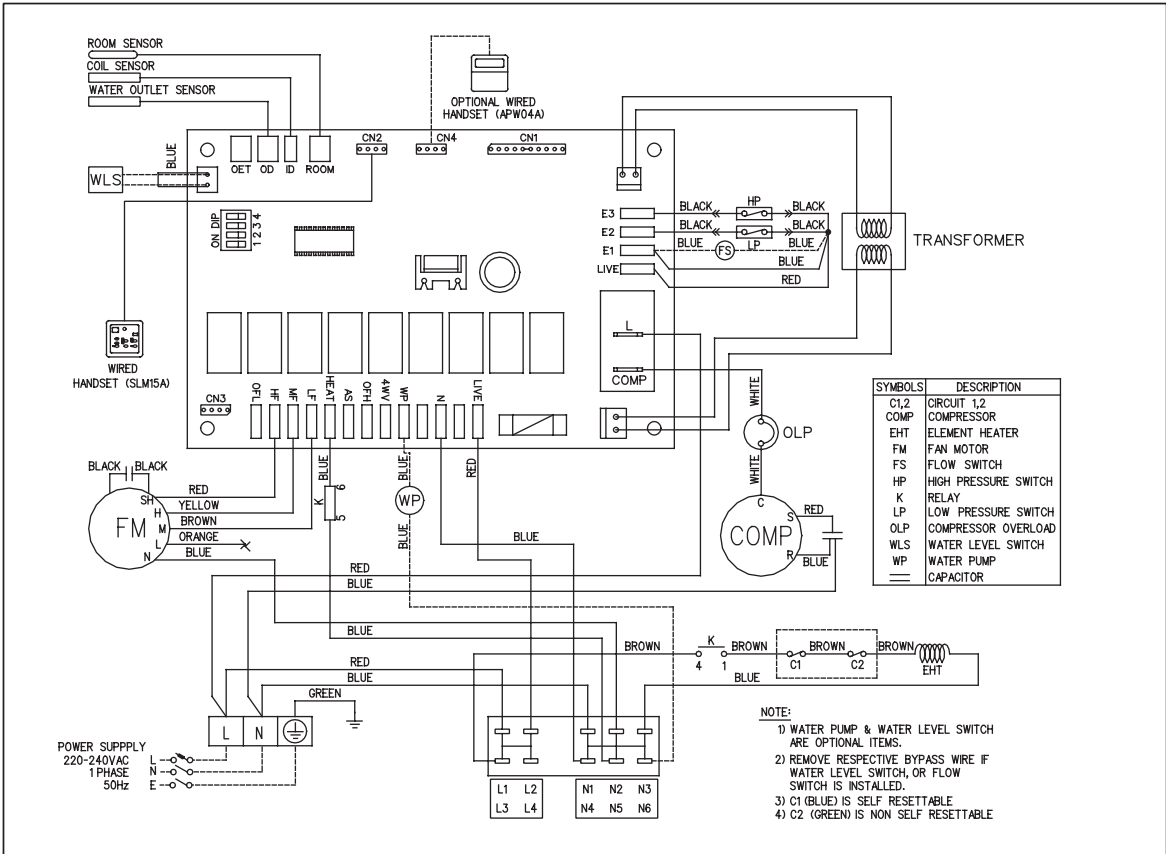
2) ALL UNITS ARE BEING TESTED AND COMPLY TO ARI 320.

Wiring Diagrams

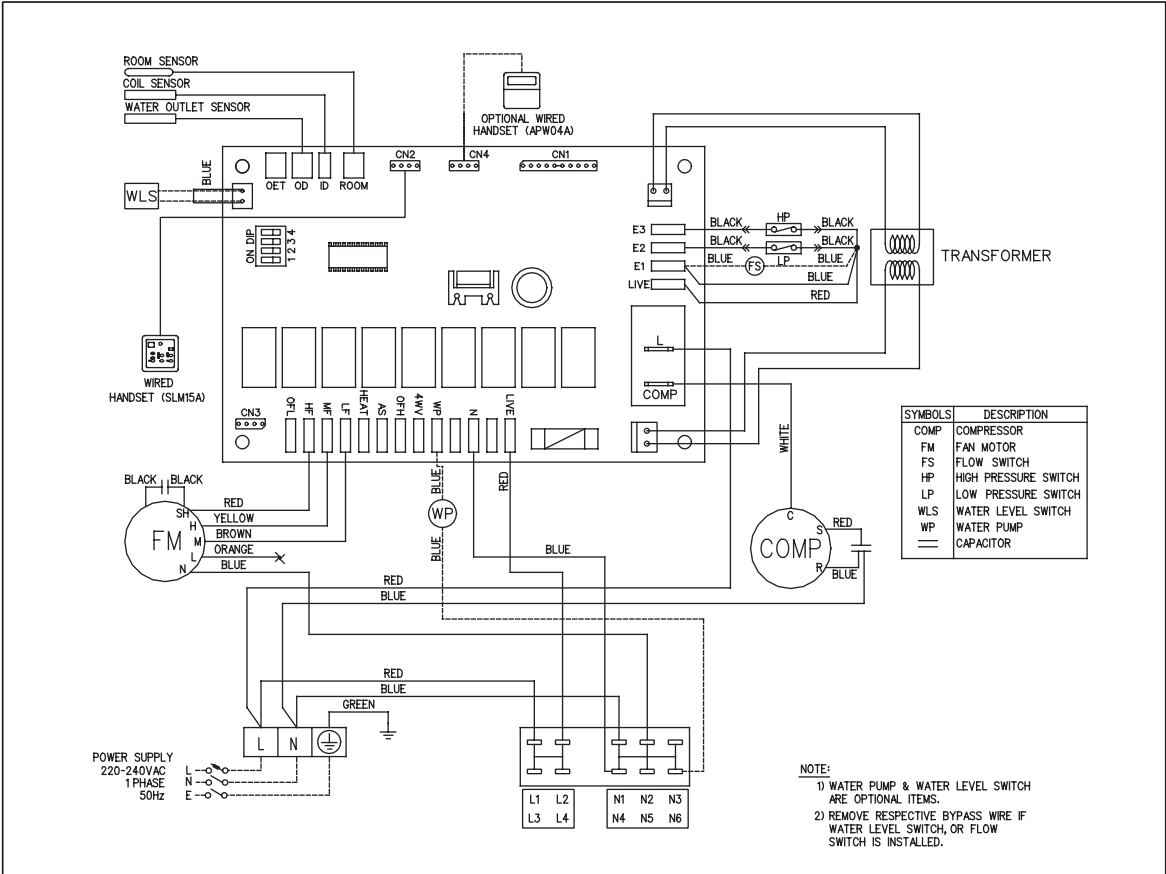
Model : MWH 011/012/015 B



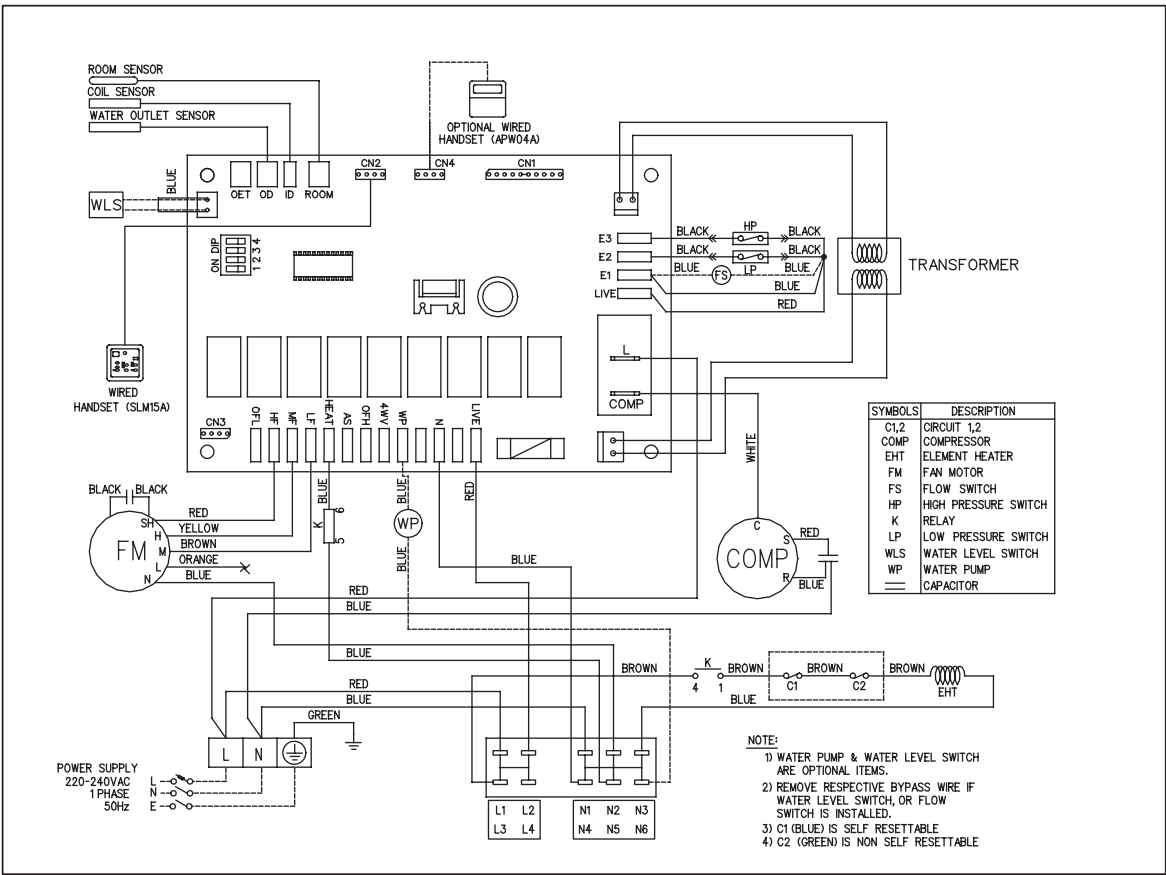
Model : MWH 011/012/015 B (Heater)



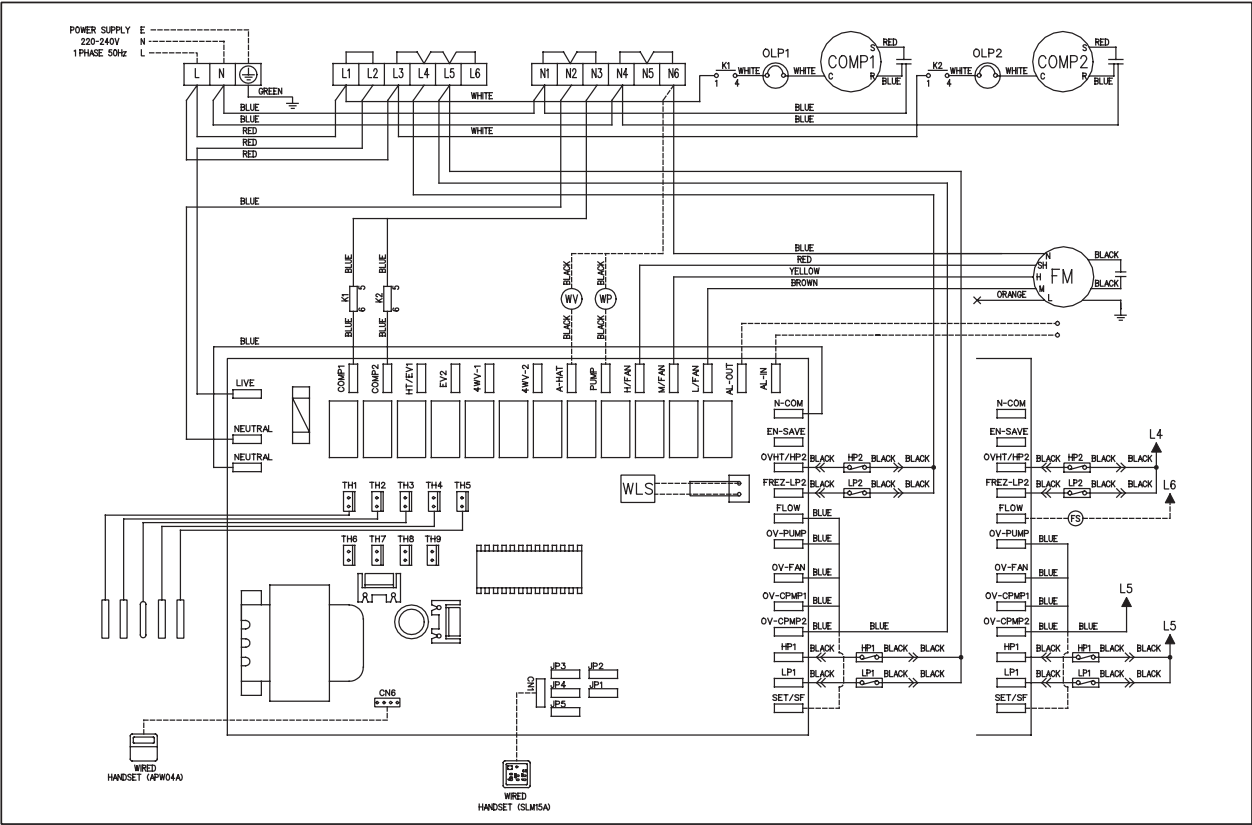
Model : MWH 020 B



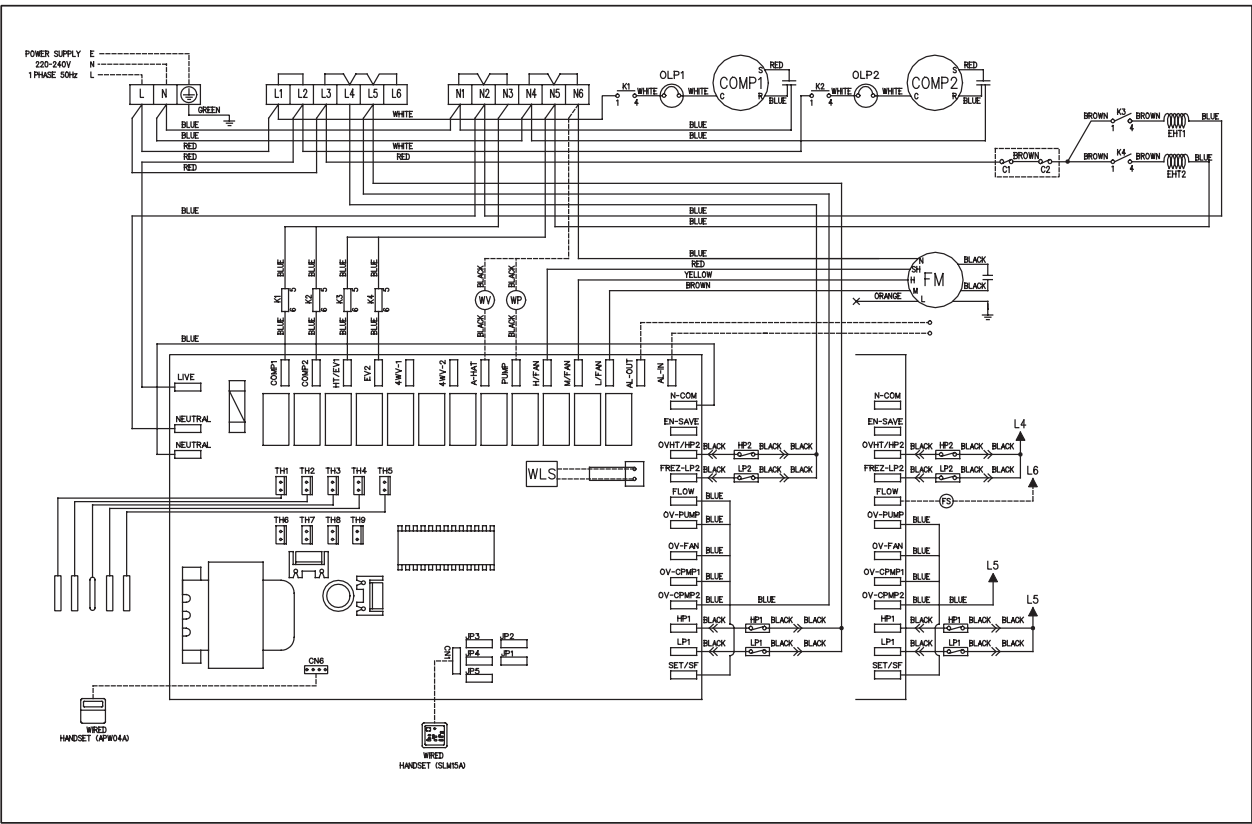
Model : MWH 020 B (Heater)



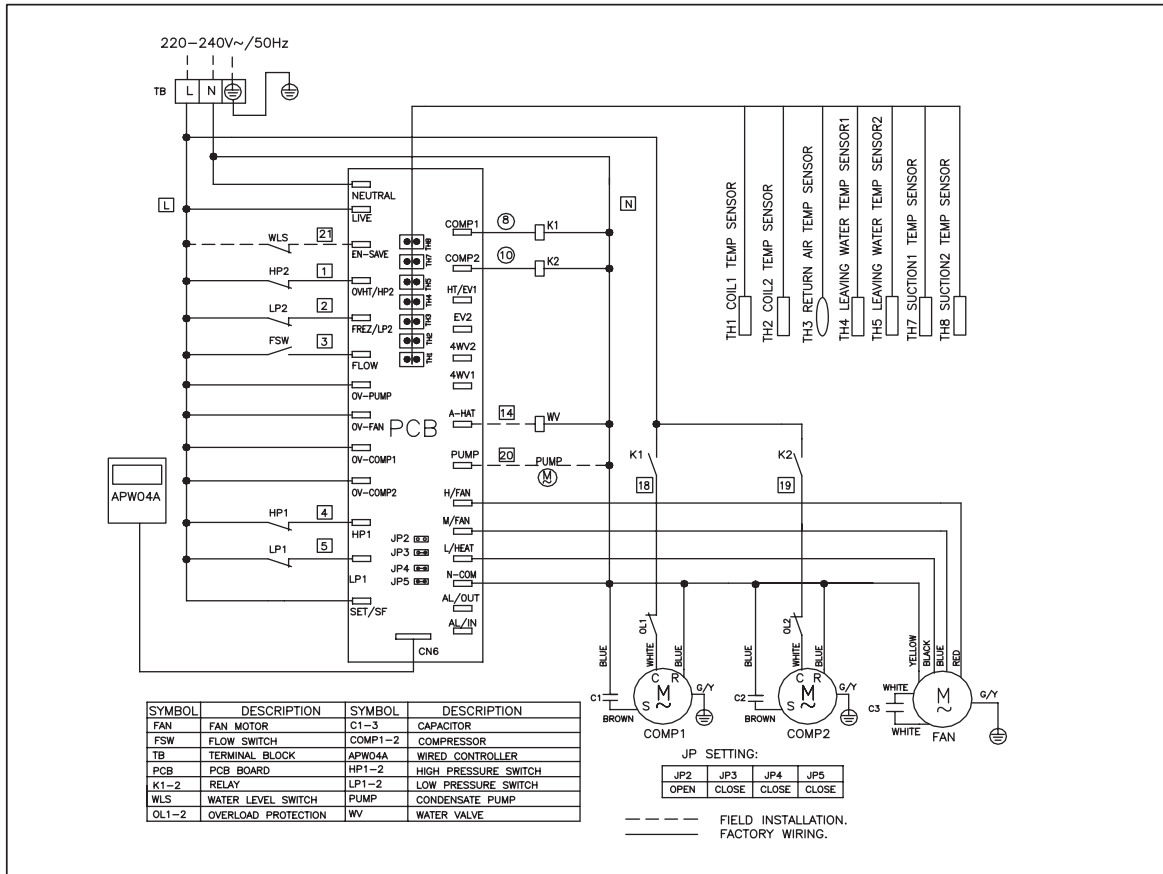
Model : MWH 025 B



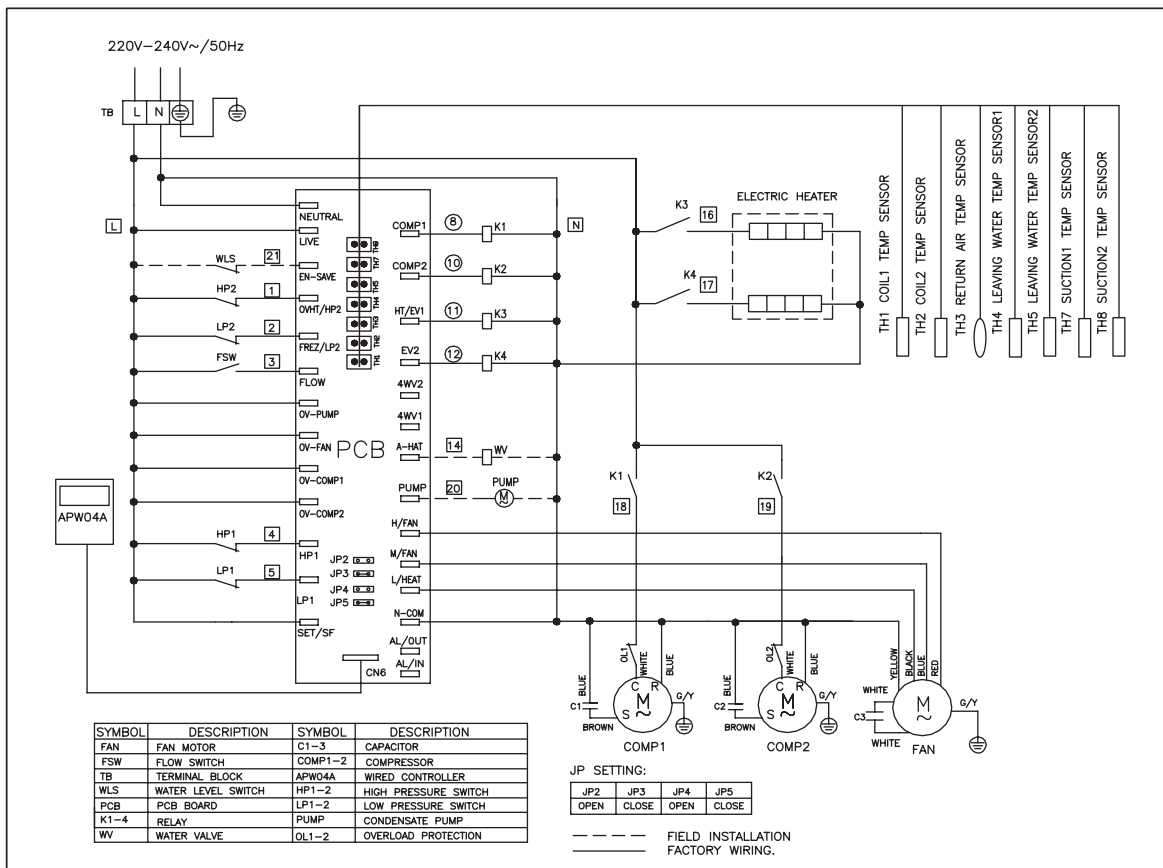
Model : MWH 025 B (Heater)



Model : MWH 030 B



Model : MWH 030 BD (Heater)



220-240V~/50Hz

TB L N

L

NEUTRAL

LIVE

WLS 7

EN-SAVE

HP2 1

LP2 2

FSW 3

FLOW

OY-PUMP

OY-FAN

OY-COMP1

OY-COMP2

HP1 4

LP1 5

JP2

JP3

JP4

JP5

SET/SF

AL/IN

AL/OUT

CN6

COMP1 8

COMP2 10

HT/EV1

EV2

4WV2

4WV1

A-HAT 14

PUMP 15

H/FAN1 17

V/FAN2 18

L/HEAT 20

N-COM

TH1 COIL1 TEMP SENSOR

TH2 COIL2 TEMP SENSOR

TH3 RETURN AIR TEMP SENSOR

TH4 LEAVING WATER TEMP SENSOR1

TH5 LEAVING WATER TEMP SENSOR2

TH7 SUCTION1 TEMP SENSOR

TH8 SUCTION2 TEMP SENSOR

KM1

KM2

K1

K2

K3

COMP1

COMP2

FAN

APW04A

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
FAN	FAN MOTOR	C1-3	CAPACITOR
FSW	FLOW SWITCH	COMP1-2	COMPRESSOR
TB	TERMINAL BLOCK	APW04A	WIREED CONTROLLER
PCB	PCB BOARD	HP1-2	HIGH PRESSURE SWITCH
K1-3	RELAY	LP1-2	LOW PRESSURE SWITCH
WLS	WATER LEVEL SWITCH	PUMP	CONDENSATE PUMP
KM1-2	CONTACTOR	WV	WATER VALVE

JP SETTING

JP2	JP3	JP4	JP6
OPEN	CLOSE	CLOSE	CLOSE

— — — FIELD INSTALLATION.

— — — FACTORY WIRING.

380-415V/3N~/50Hz

TB R S T N

TH1 COIL1 TEMP SENSOR
TH2 COIL2 TEMP SENSOR
TH3 RETURN AIR TEMP SENSOR
TH4 LEAVING WATER TEMP SENSOR1
TH5 LEAVING WATER TEMP SENSOR2
TH7 SUCTION1 TEMP SENSOR
TH8 SUCTION2 TEMP SENSOR

COMP1
COMP2
FAN
PCB
PUMP
PTC HEATER

WLS
HP2
LP2
FSW
HP1
LP1

NEUTRAL
LIVE
EN-SAVE
O/H1/HP2
FREQ/LP2
FLOW
O/P-PUMP
O/P-FAN
O/P-COMP1
O/P-COMP2
HP1
LP1
SET/SF

COMP1 ⑧ KM1
COMP2 ⑩ KM2
H1/EV1 ⑪ KM3
EV2 ⑫ KM4
4WV2
4WV1
A-WAT ⑭ WV
PUMP ⑮ PUMP
H/FAN ⑰ K1
W/FAN ⑱ K2
L/HEAT ⑳ K3
N-COM
AL/IN
AL/OUT
CNG

APW04A

SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
FAN	FAN MOTOR	C1-3	CAPACITOR
FSW	FLOW SWITCH	COMP1-2	COMPRESSOR
TB	TERMINAL BLOCK	APW04A	WIRED CONTROLLER
PCB	CONTROLLER	HP1-2	HIGH PRESSURE SWITCH
K1-3	RELAY	LP1-2	LOW PRESSURE SWITCH
TH	THERMOSTAT	PUMP	CONDENSATE PUMP
WLS	WATER LEVEL SWITCH	WV	WATER VALVE
FUSE	THERMAL FUSE	KM1-4	CONTACTOR

JP SETTING:

JP2	JP3	JP4	JP6
OPEN	CLOSE	OPEN	CLOSE

--- FIELD INSTALLATION.
--- FACTORY WIRING.

[illegible]

380-415V/3N~/50Hz

BK

R S T N TB

KM1 KM2 KM3 KM4

OL1 OL2

COMP1 COMP2

F

K1 K2 K3

FM1 FM2

HEATER1 HEATER2

TH1 TH2 TH3 TH4 TH5 TH7 TH8

TH1 COIL1 TEMP SENSOR

TH2 COIL2 TEMP SENSOR

TH3 RETURN AIR TEMP SENSOR

TH4 LEAVING WATER1 TEMP SENSOR

TH5 LEAVING WATER2 TEMP SENSOR

TH7 SUCTION1 TEMP SENSOR

TH8 SUCTION2 TEMP SENSOR

DB3-A

APW04A

PCB

N-COM 22 KM1

EN-SAVE 23 KM2

HP2 24 KM3

LP2 25 KM4

FSW 26

FLOW 27

HT/EV1 28

EV2 29

4WV-1 30

4WV-2 31

A-HAT 32

PUMP 33

H/FAN 34

M/FAN 35

L/HEAT 36

NEUTRAL 37

SET/SF 38

OV-PUMP 39

LIVE 40

COMP1 41

COMP2 42

HT/EV1 43

EV2 44

4WV-1 45

4WV-2 46

A-HAT 47

PUMP 48

H/FAN 49

M/FAN 50

L/HEAT 51

NEUTRAL 52

SET/SF 53

OV-PUMP 54

LIVE 55

COMP1 56

COMP2 57

HT/EV1 58

EV2 59

4WV-1 60

4WV-2 61

A-HAT 62

PUMP 63

H/FAN 64

M/FAN 65

L/HEAT 66

NEUTRAL 67

SET/SF 68

OV-PUMP 69

LIVE 70

COMP1 71

COMP2 72

HT/EV1 73

EV2 74

4WV-1 75

4WV-2 76

A-HAT 77

PUMP 78

H/FAN 79

M/FAN 80

L/HEAT 81

NEUTRAL 82

SET/SF 83

OV-PUMP 84

LIVE 85

COMP1 86

COMP2 87

HT/EV1 88

EV2 89

4WV-1 90

4WV-2 91

A-HAT 92

PUMP 93

H/FAN 94

M/FAN 95

L/HEAT 96

NEUTRAL 97

SET/SF 98

OV-PUMP 99

LIVE 100

COMP1 101

COMP2 102

HT/EV1 103

EV2 104

4WV-1 105

4WV-2 106

A-HAT 107

PUMP 108

H/FAN 109

M/FAN 110

L/HEAT 111

NEUTRAL 112

SET/SF 113

OV-PUMP 114

LIVE 115

COMP1 116

COMP2 117

HT/EV1 118

EV2 119

4WV-1 120

4WV-2 121

A-HAT 122

PUMP 123

H/FAN 124

M/FAN 125

L/HEAT 126

NEUTRAL 127

SET/SF 128

OV-PUMP 129

LIVE 130

COMP1 131

COMP2 132

HT/EV1 133

EV2 134

4WV-1 135

4WV-2 136

A-HAT 137

PUMP 138

H/FAN 139

M/FAN 140

L/HEAT 141

NEUTRAL 142

SET/SF 143

OV-PUMP 144

LIVE 145

COMP1 146

COMP2 147

HT/EV1 148

EV2 149

4WV-1 150

4WV-2 151

A-HAT 152

PUMP 153

H/FAN 154

M/FAN 155

L/HEAT 156

NEUTRAL 157

SET/SF 158

OV-PUMP 159

LIVE 160

COMP1 161

COMP2 162

HT/EV1 163

EV2 164

4WV-1 165

4WV-2 166

A-HAT 167

PUMP 168

H/FAN 169

M/FAN 170

L/HEAT 171

NEUTRAL 172

SET/SF 173

OV-PUMP 174

LIVE 175

COMP1 176

COMP2 177

HT/EV1 178

EV2 179

4WV-1 180

4WV-2 181

A-HAT 182

PUMP 183

H/FAN 184

M/FAN 185

L/HEAT 186

NEUTRAL 187

SET/SF 188

OV-PUMP 189

LIVE 190

COMP1 191

COMP2 192

HT/EV1 193

EV2 194

4WV-1 195

4WV-2 196

A-HAT 197

PUMP 198

H/FAN 199

M/FAN 200

L/HEAT 201

NEUTRAL 202

SET/SF 203

OV-PUMP 204

LIVE 205

COMP1 206

COMP2 207

HT/EV1 208

EV2 209

4WV-1 210

4WV-2 211

A-HAT 212

PUMP 213

H/FAN 214

M/FAN 215

L/HEAT 216

NEUTRAL 217

SET/SF 218

OV-PUMP 219

LIVE 220

COMP1 221

COMP2 222

HT/EV1 223

EV2 224

4WV-1 225

4WV-2 226

A-HAT 227

PUMP 228

H/FAN 229

M/FAN 230

L/HEAT 231

NEUTRAL 232

SET/SF 233

OV-PUMP 234

LIVE 235

COMP1 236

COMP2 237

HT/EV1 238

EV2 239

4WV-1 240

4WV-2 241

A-HAT 242

PUMP 243

H/FAN 244

M/FAN 245

L/HEAT 246

NEUTRAL 247

SET/SF 248

OV-PUMP 249

LIVE 250

COMP1 251

COMP2 252

HT/EV1 253

EV2 254

4WV-1 255

4WV-2 256

A-HAT 257

PUMP 258

H/FAN 259

M/FAN 260

L/HEAT 261

NEUTRAL 262

SET/SF 263

OV-PUMP 264

LIVE 265

COMP1 266

COMP2 267

HT/EV1 268

EV2 269

4WV-1 270

4WV-2 271

A-HAT 272

PUMP 273

H/FAN 274

M/FAN 275

L/HEAT 276

NEUTRAL 277

SET/SF 278

OV-PUMP 279

LIVE 280

COMP1 281

COMP2 282

HT/EV1 283

EV2 284

4WV-1 285

4WV-2 286

A-HAT 287

PUMP 288

H/FAN 289

M/FAN 290

L/HEAT 291

NEUTRAL 292

SET/SF 293

OV-PUMP 294

LIVE 295

COMP1 296

COMP2 297

HT/EV1 298

EV2 299

4WV-1 300

4WV-2 301

A-HAT 302

PUMP 303

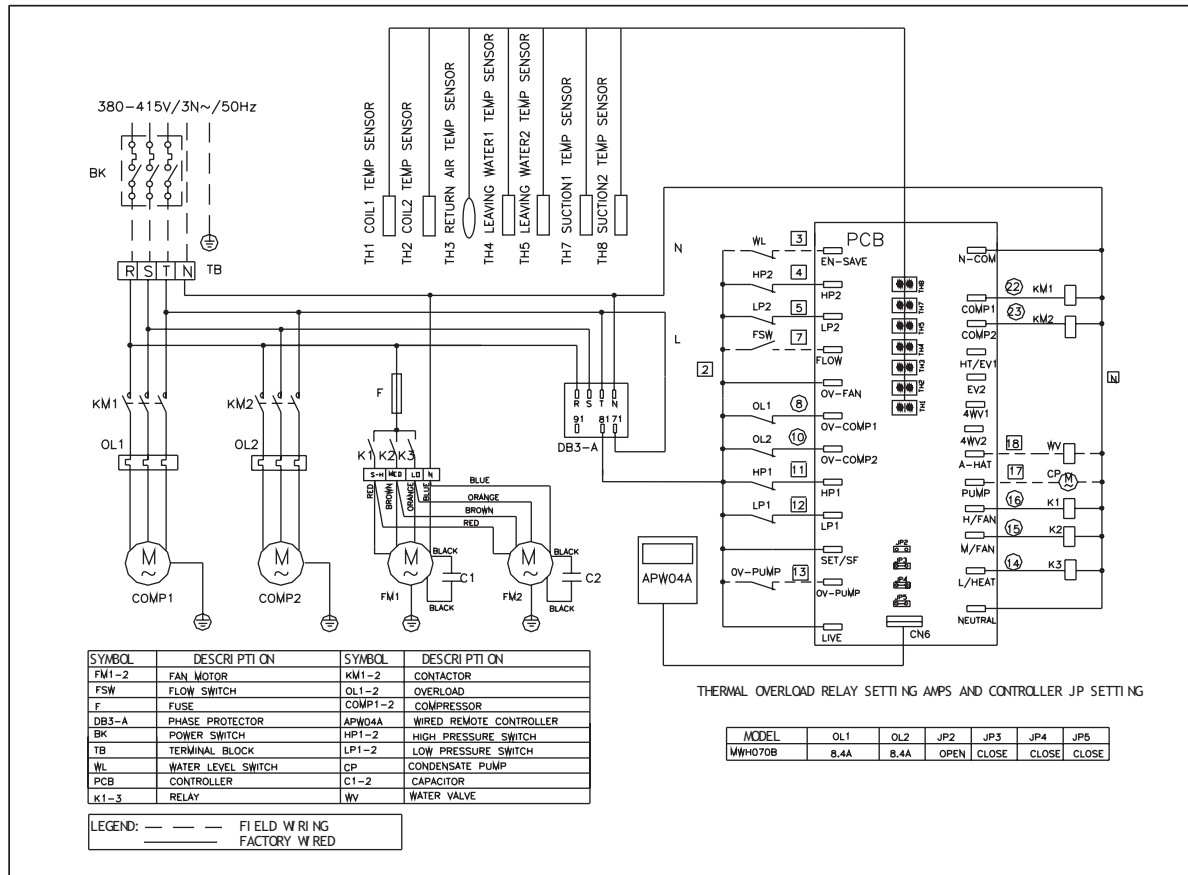
H/FAN 304

M/FAN 305

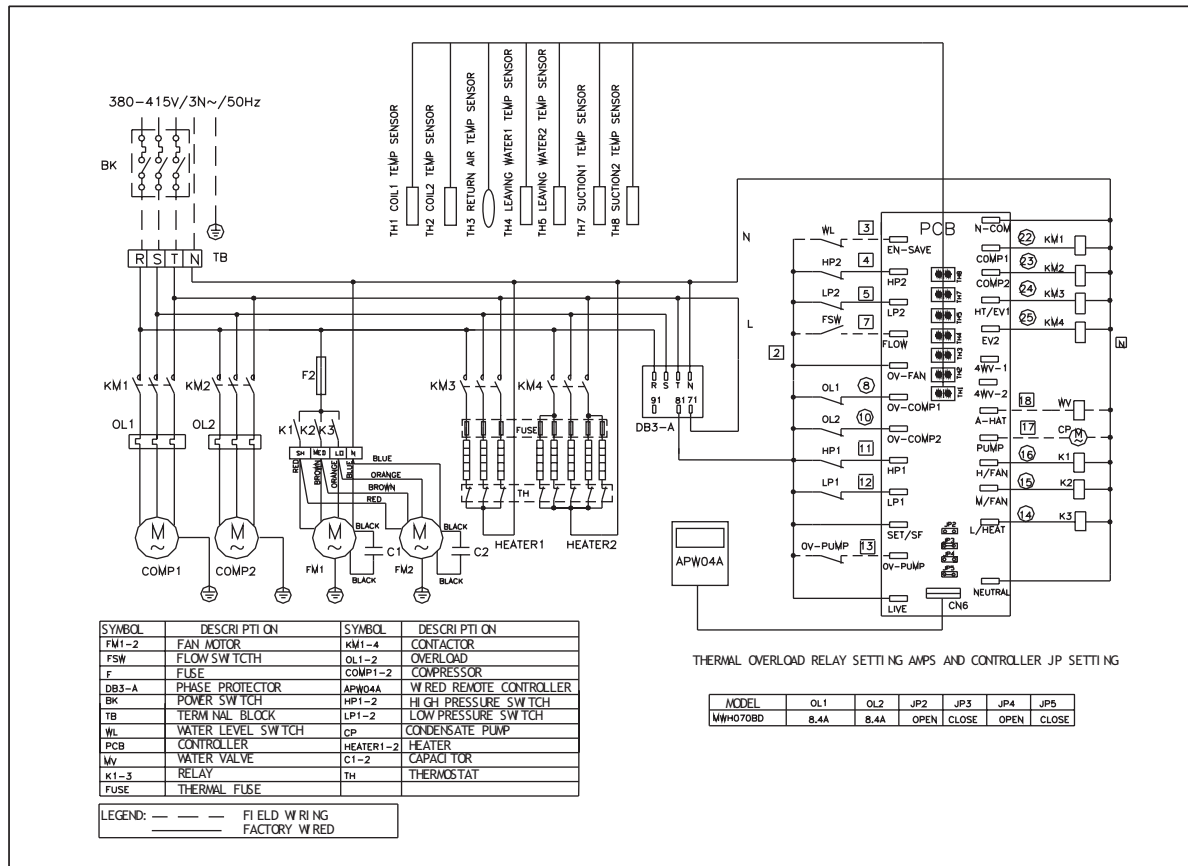
L/HEAT 306

NEUTRAL 307

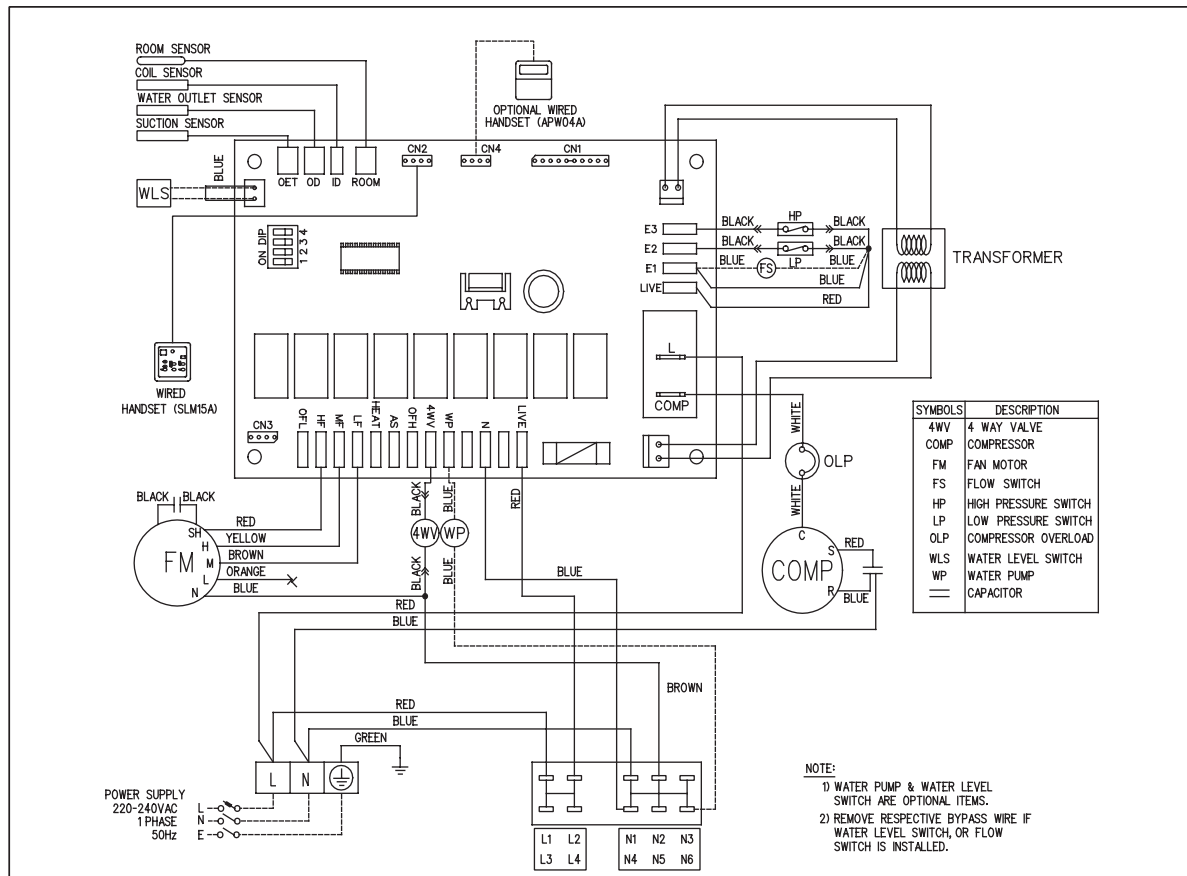
Model : MWH 070 B



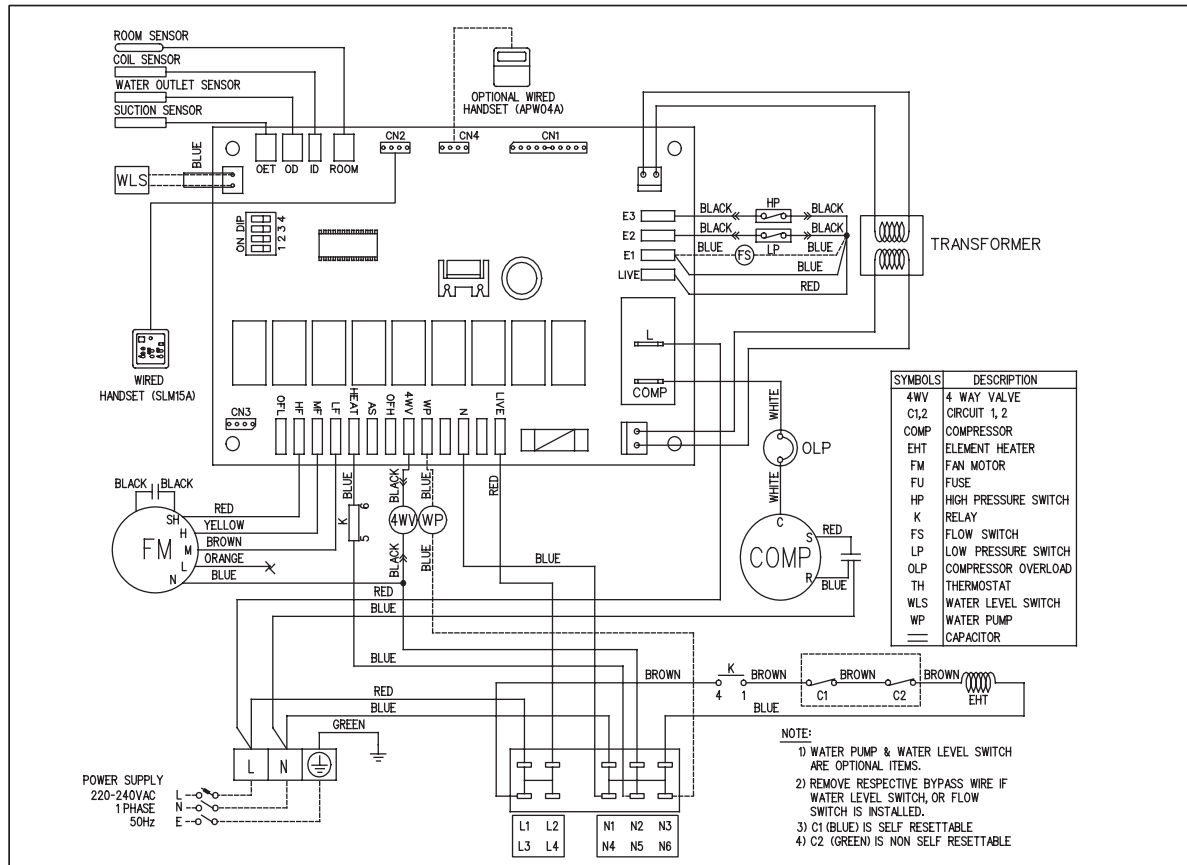
Model : MWH 070 BD (Heater)



Model : MWH 011/012/015 BR



Model : MWH 011/012/015 BR (Heater)



ROOM SENSOR
COIL SENSOR
WATER OUTLET SENSOR
SUCTION SENSOR

OPTIONAL WIRED
HANDSET (APW04A)

WLS
BLUE
OET OD ROOM
CN2
CN4
CN1

ON DIP
1 2 3 4

WIRE
HANDSET (SLM15A)

TRANSFORMER

HP
BLACK
BLACK
BLACK
BLUE
BLUE
RED
FS
LP
E3
E2
E1
LIVE

COMP

WHITE

BLACK
BLACK
RED
YELLOW
BROWN
ORANGE
BLUE
SH
H
M
L
N
FM

4WV
WP
N
LIVE
RED
BLUE
BLACK
RED
BLUE
RED
BLUE
GREEN

POWER SUPPLY
220-240VAC
1 PHASE
50Hz
L
N
E

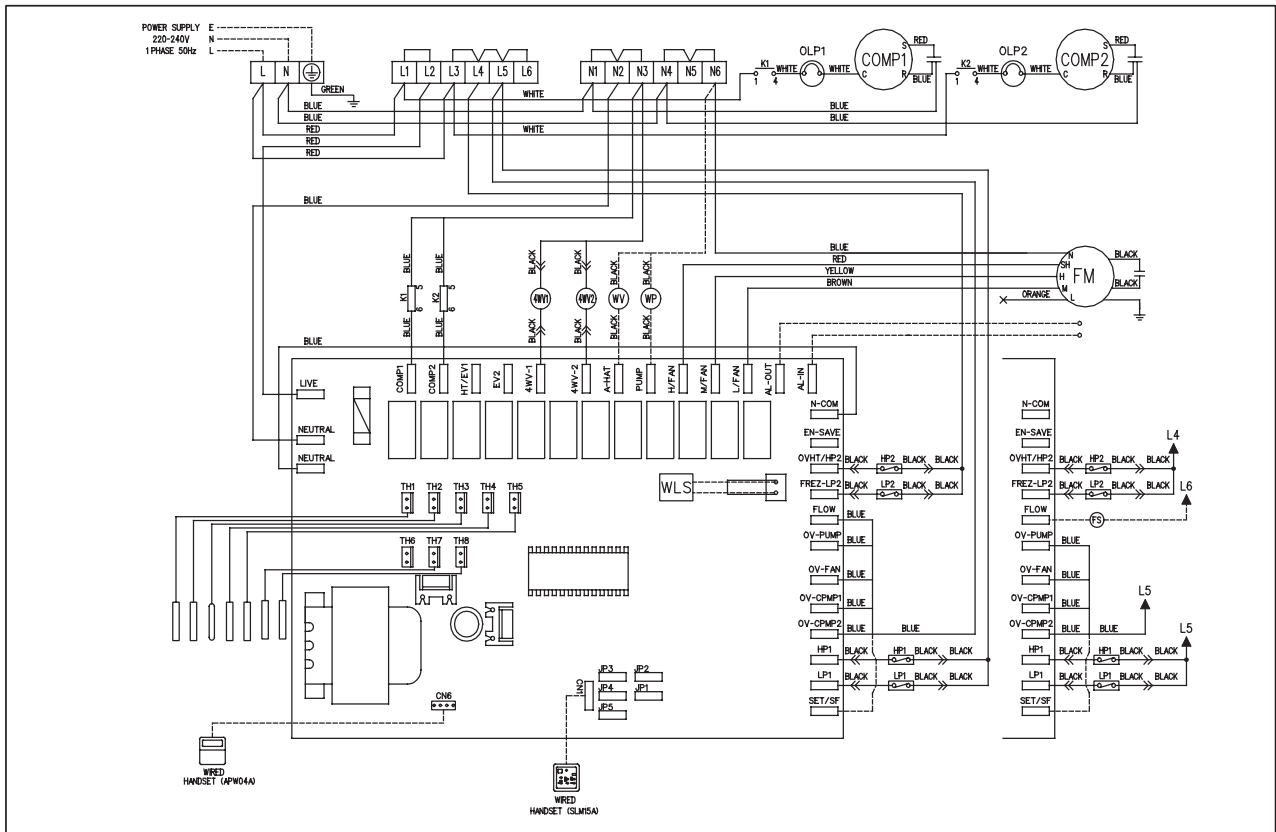
L1 L2
L3 L4
N1 N2 N3
N4 N5 N6

SYMBOLS	DESCRIPTION
4WV	4 WAY VALVE
COMP	COMPRESSOR
FM	FAN MOTOR
FS	FLOW SWITCH
HP	HIGH PRESSURE SWITCH
LP	LOW PRESSURE SWITCH
WLS	WATER LEVEL SWITCH
WP	WATER PUMP
—	CAPACITOR

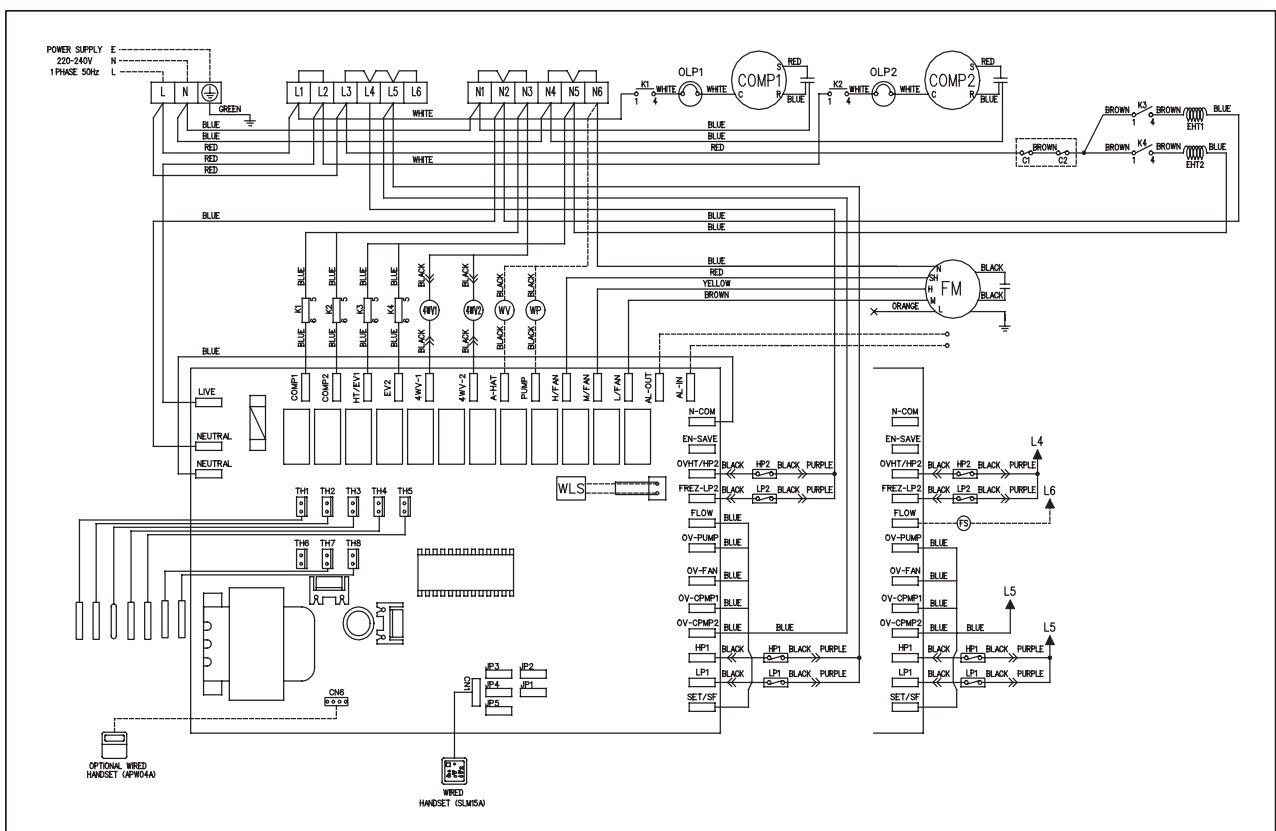
NOTE:
1) WATER PUMP & WATER LEVEL SWITCH ARE OPTIONAL ITEMS.
2) REMOVE RESPECTIVE BYPASS WIRE IF WATER LEVEL SWITCH, OR FLOW SWITCH IS INSTALLED.

[illegible]

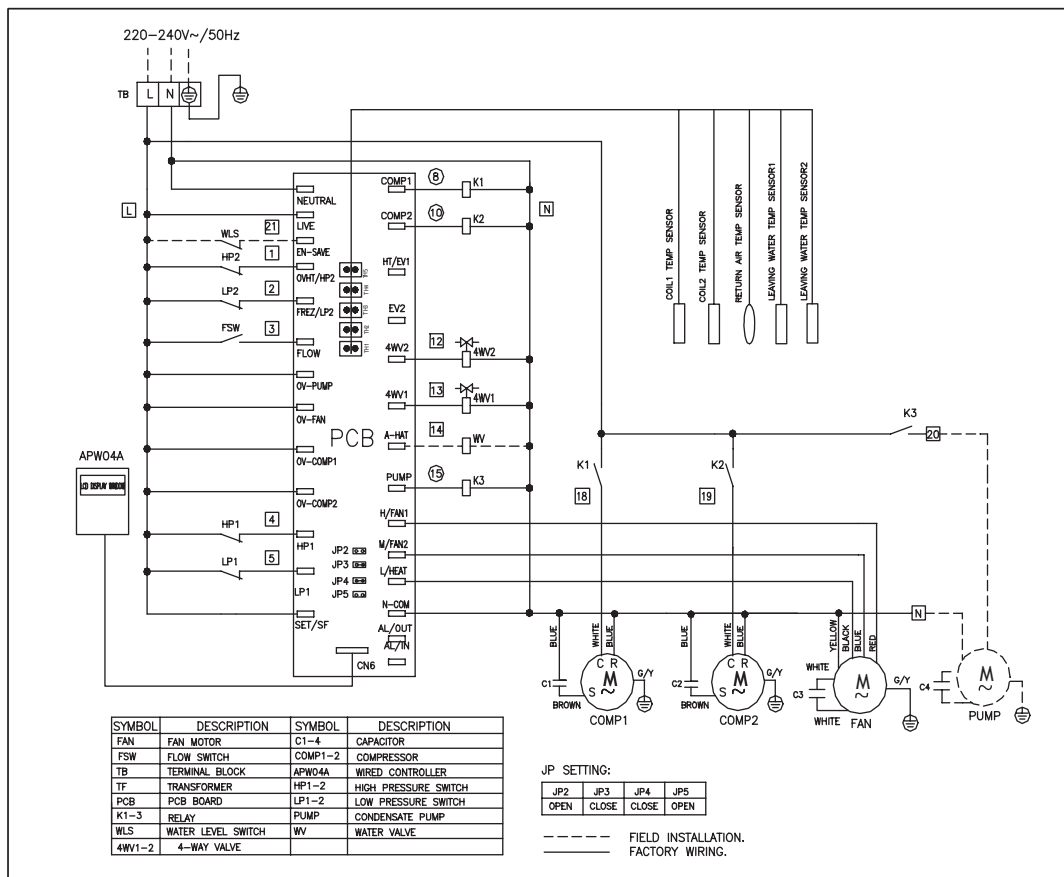
Model : MWH 025 BR



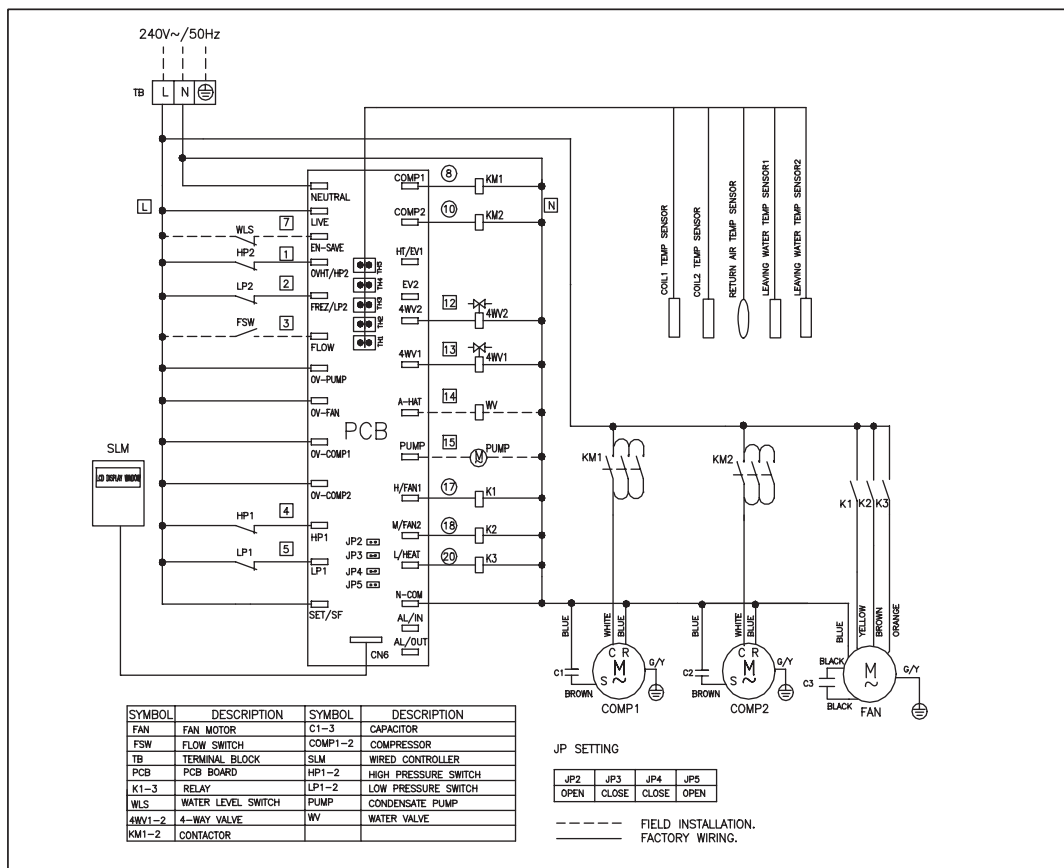
Model : MWH 025 BR (Heater)



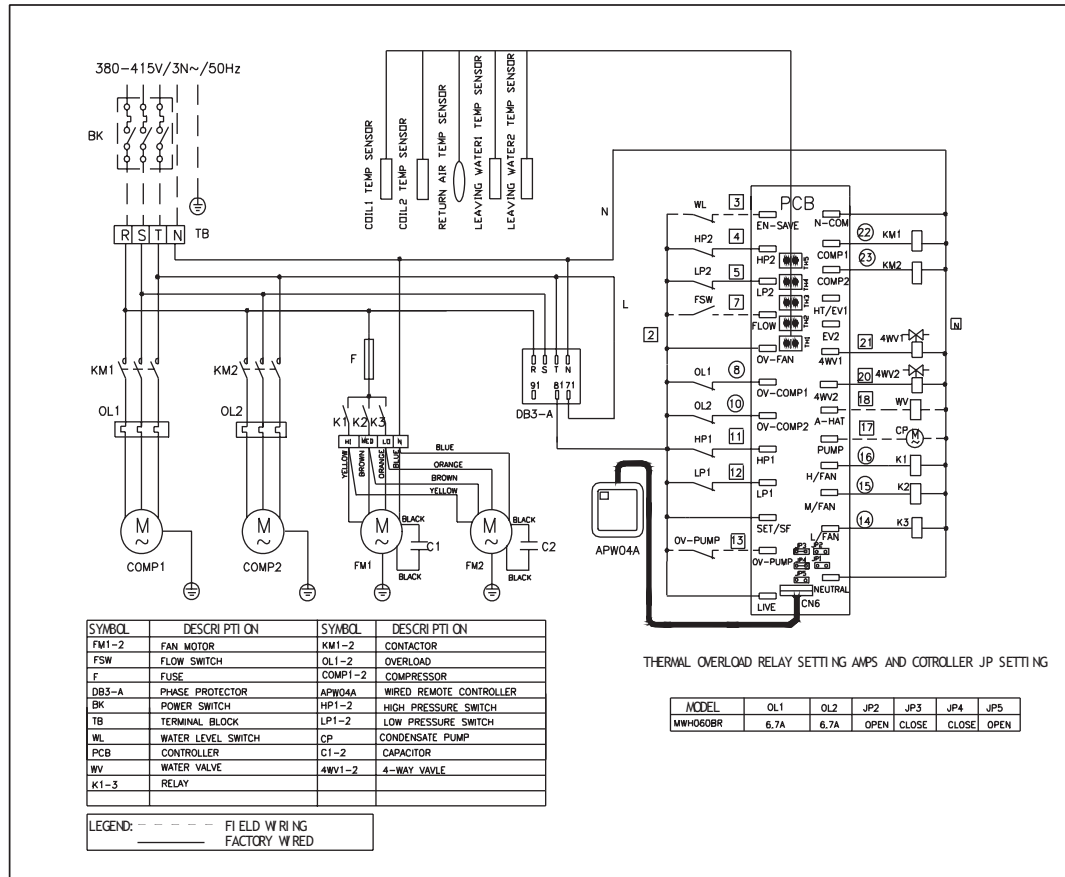
Model : MWH 030 BR



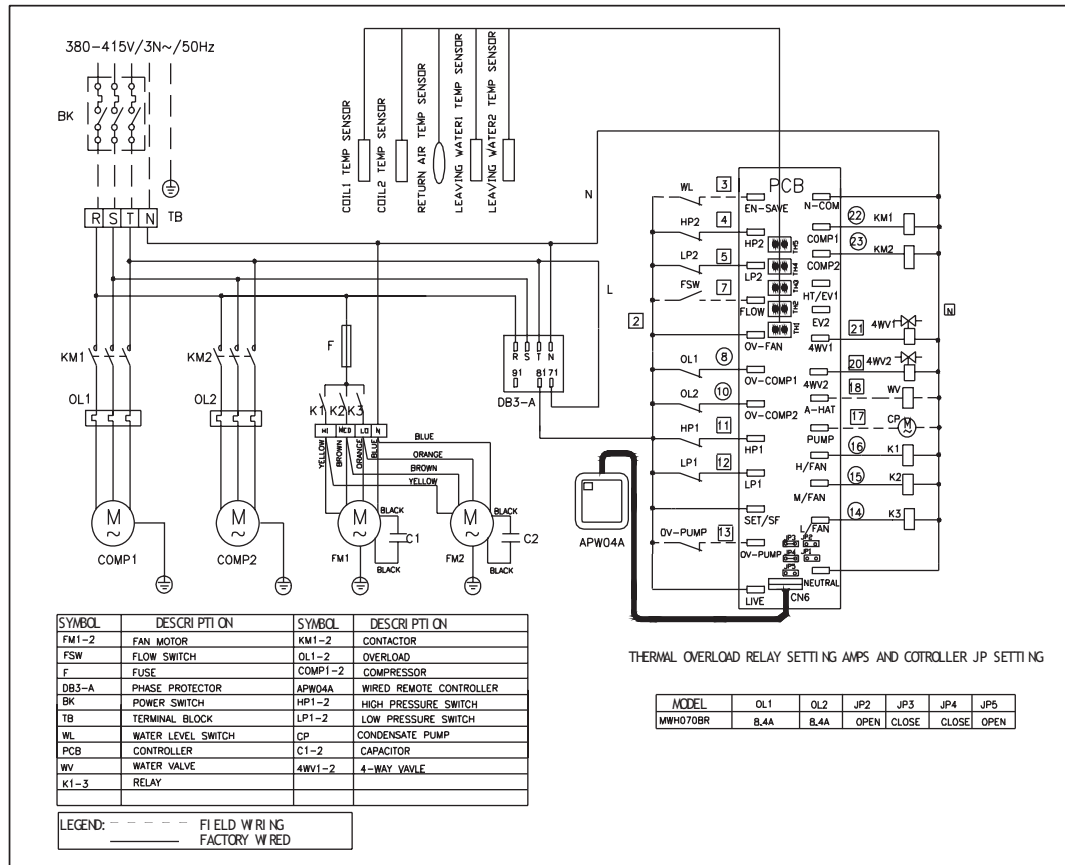
Model : MWH 040/050 BR



Model : MWH 060 BR



Model : MWH 070 BR



Servicing And Maintenance

- Service and maintenance should be performed by authorized dealer or qualified contractor.
- Clean the air filter at least once a month. More frequently is recommended.
- Internal components can be accessed through two access service panels. Electrical box placed externally for easy access of electrical components.
- Regular checks (once a month) on the water strainer are recommended. Clean the strainer if dirty or clogged.
- Check internal compartment for refrigerant leak. Compressor oil stain may indicate leakage.
- Maintain a log data on measurement of volts, amps, and water temperature difference (heating and cooling) is recommended. A comparison of the data during start-up and periodic data is useful as indicator of general condition of the equipment.

Caution

- Do not attempt to do any service or maintenance when the unit is operating.
- Off the main power supply before doing maintenance.
- Unauthorized modification of the unit is not allowed.

Troubleshooting

- Troubleshooting must be performed by authorized dealer or qualified contractor.

Fault	Causes/ Check Point
Unit cannot start	1. Power supply plug disconnected. 2. Circuit breaker or fuse tripped/ blown. 3. Wiring connection. 4. If fault persist, contact your installer.
Neither fan motor and compressor run	1. The fuse may be blown or circuit breaker opened. 2. Check electrical circuit or motor winding for shorts or grounds. 3. Check wiring connections. Wire may be loosening. Replace or tighten. 4. Control system may be faulty.
Compressor does not operate	1. Check capacitor if available. Replace capacitor if faulty. 2. Check wiring connection. Wire may be loosening. Replace or tighten. 3. The high pressure switch may tripped due to: a) No or insufficient water flows into and leaves heat exchanger. May be clogged. b) Water entering temperature higher than the maximum operating conditions. c) Not enough air flow into fan coil units. May be due to dirty filter or block by object, cardboard and etc (heating mode). d) Fan coil motor failure (heating mode). e) Unit over-charged. Release some of the refrigerant charge. 4. The compressor internal/ external overload protection is triggered. If the compressor body is extremely hot, the overload will not reset until it cooled down. 5. The compressor winding may be grounded to the compressor shell. If so, replace the compressor.
Insufficient cooling or heating	1. Check handset for temperature setting. 2. Filter may be clogged. Check and clean the filter. 3. Check capillary tube for possible restriction of refrigerant flow. Replace capillary tube if proven so. 4. The reversing valve may be defective (valve position is not shifted properly), creating a bypass of refrigerant. Check the reversing valve coil connection. 5. Check for restriction of air and water flow. 6. Refrigerant leakage. Check all piping bends and connection for leakage. Repair the leakage area or replace with new piping. 7. Window or door wide open. 8. Unit may be under-sized.
Insufficient water flow through heat exchanger	1. Valves are not opened fully. 2. Circulating water pump is faulty. 3. Water pipes or strainers are clogged.
Noisy operation	1. Check for loose bolts or screws. 2. Make sure rubber isolators are used for installation. 3. Check for water balance to units for proper water flow rate. 4. Check for tubing touching compressor or other surface. Readjust tubing by bending it slightly. 5. Fan blower knocking/ hitting on its housing. 6. May be due to worn compressor bearing.

Overall Checking

Ensure that:

- 1) The unit has been mounted solidly and rigid in position.
- 2) The piping and connections are leak-proof.
- 3) Proper wiring has been installed.

Drainage Check

Pour some water into the left side of the drain pan (the drainage is at the right side of the unit).

Test run:

- 1) Conduct a test run on the unit after having performed the water drainage test and the gas leakage test.
- 2) Check the following items:
 - a) Is the electrical plug inserted firmly into the socket?
 - b) Is there any abnormal sound from the unit?
 - c) Is there any abnormal vibration on the unit or the piping?
 - d) Is the drainage of water smooth?

Confirm that:

- 1) The compressor is running.
- 2) The evaporator blower is running and discharge cool air.
- 3) The suction (low side) pressure is as recommended.
- 4) The remote controller incorporates a 3-minute delay protection in the circuit, whereby the outdoor condensing unit requires about 3 minutes delay before it can start operating.

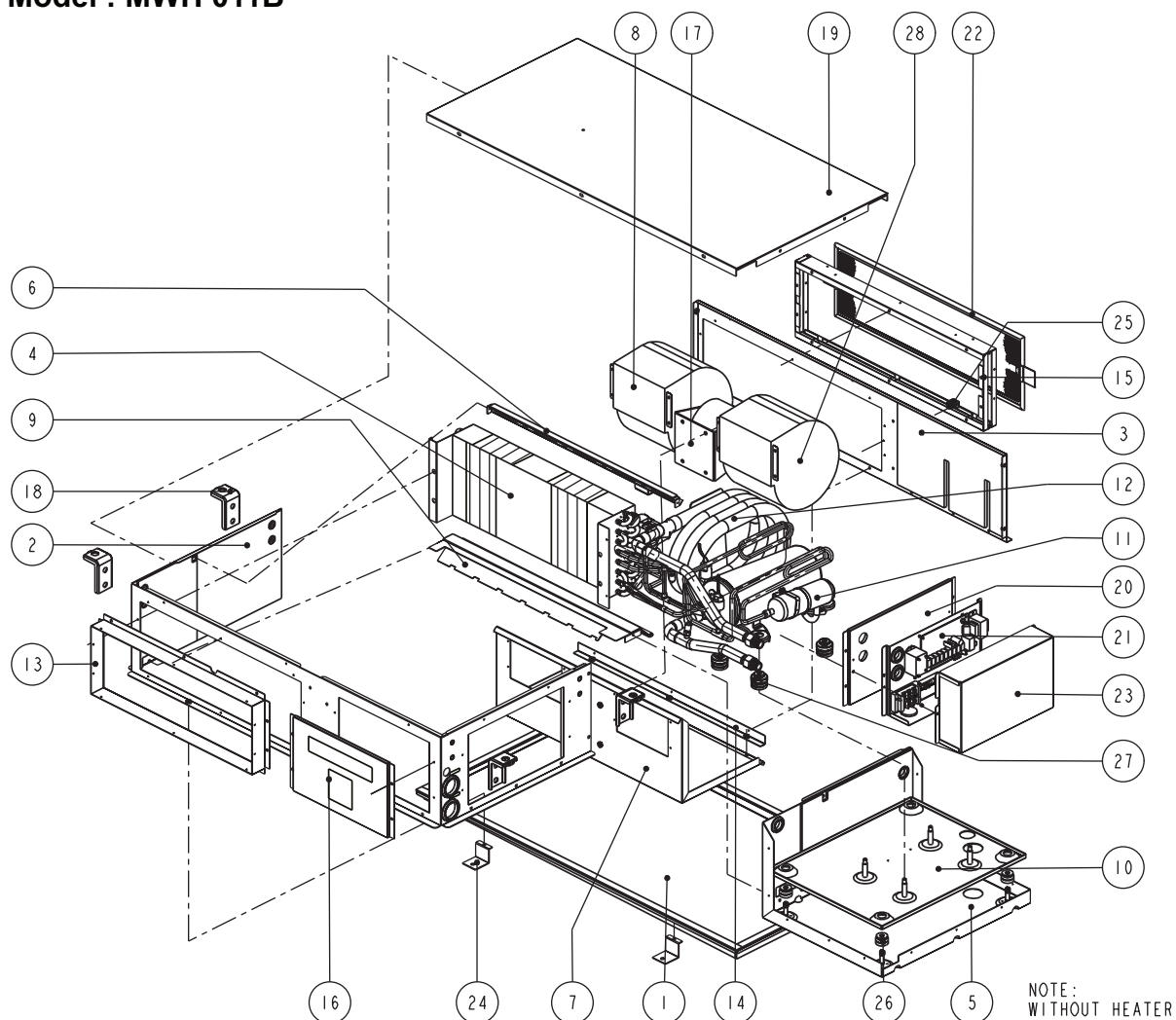
Pre Start Up Maintenance

After long Shutdown

- 1) Inspect thoroughly and clean the units.
- 2) Clean or replace air filter.
- 3) Clean condense drain line.
- 4) Clean clogged coil.
- 5) Check fan imbalance before operation and panels.
- 6) Tighten all wiring connections and panels.
- 7) Check for refrigerant leakage.

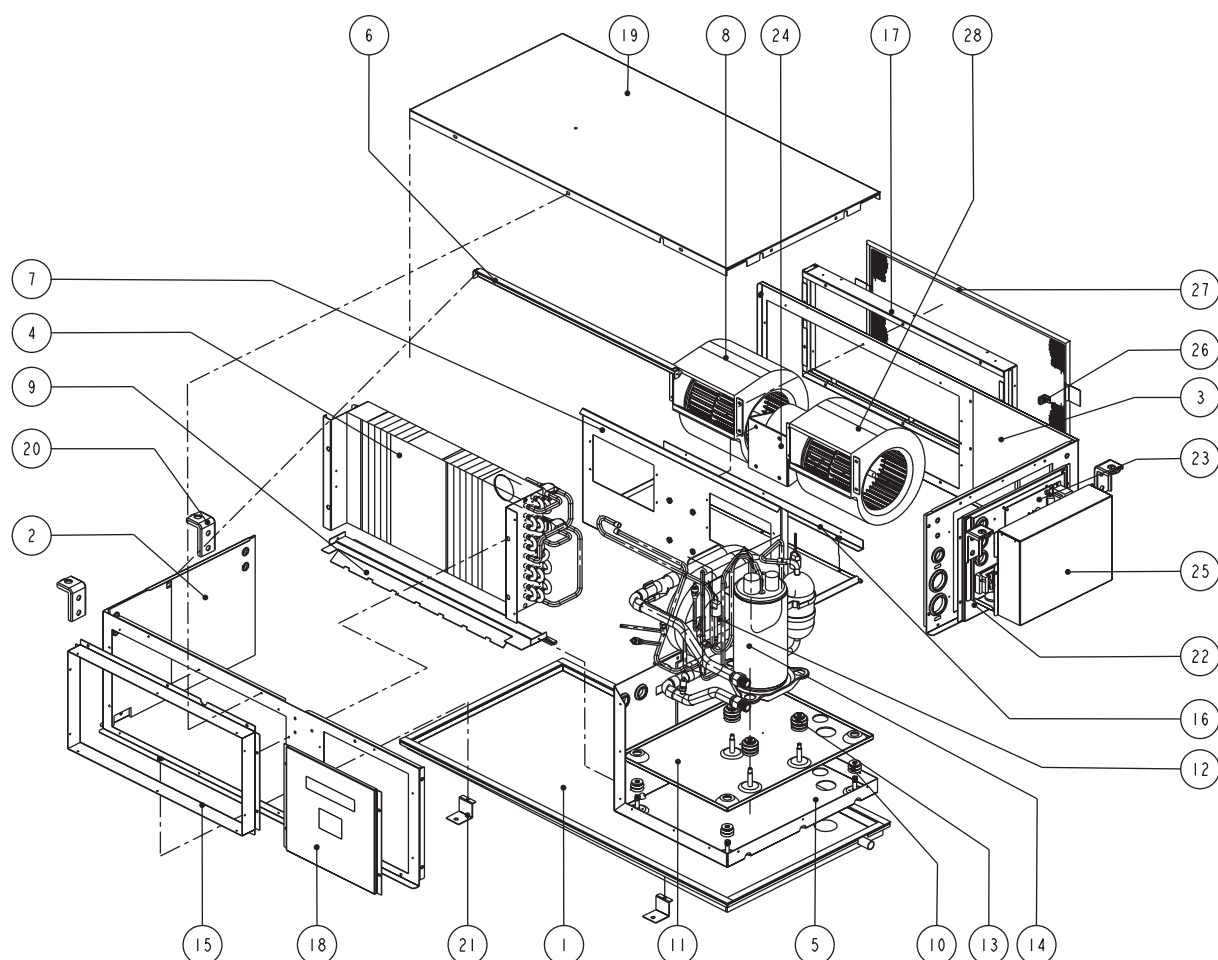
Exploded View & Part List

Model : MWH 011B



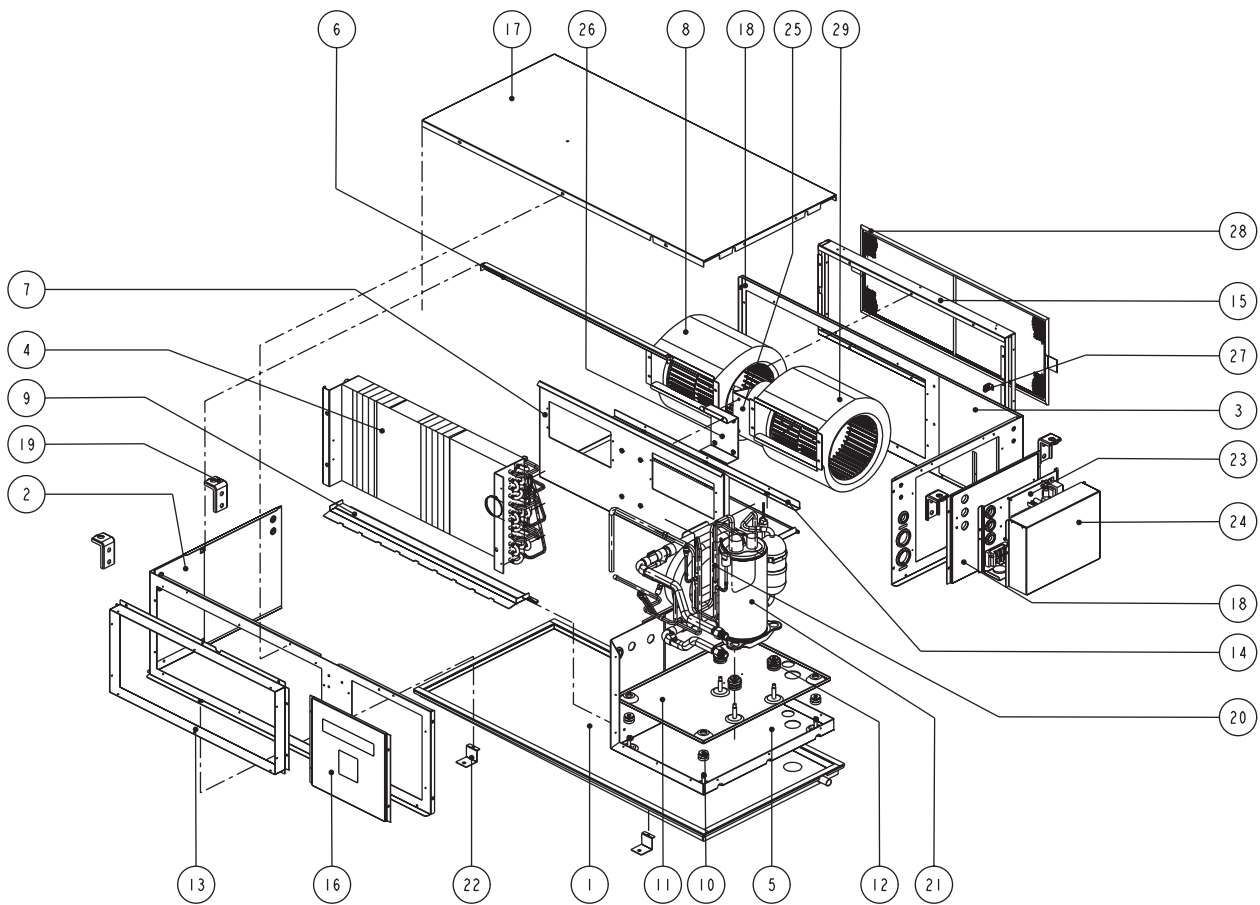
NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., DRAIN PAN	15	ASSY., FILTER FLANGE
2	ASSY., FRONT PANEL	16	PANEL, SERVICE FRONT
3	ASSY., PANEL BACK	17	MOTOR
4	ASSY., COIL	18	HANGING, BRACKET
5	ASSY., COMP. BASE LOWER	19	PANEL, TOP
6	PANEL, FAN DECK HANGER	20	PANEL, SERVICE RIGHT
7	ASSY., FAN DECK	21	ASSY., CONTROL BOX
8	RIGHT BLOWER	22	AIR FILTER
9	PANEL, WATER CONDENSATE GUIDE	23	COVER, PCB MOUNTING
10	ASSY., COMP. BASE UPPER	24	BRACKET, PACKING
11	COMPRESSOR	25	THERMISTER HOLDER
12	ASSY., TUBING	26	GROMMET, RUBBER 7070817
13	DUCT, FLANGE	27	GROMMET, RUBBER 7070815
14	ASSY., FAN DECK SUPPORT	28	LEFT BLOWER

Model : MWH 012/015B



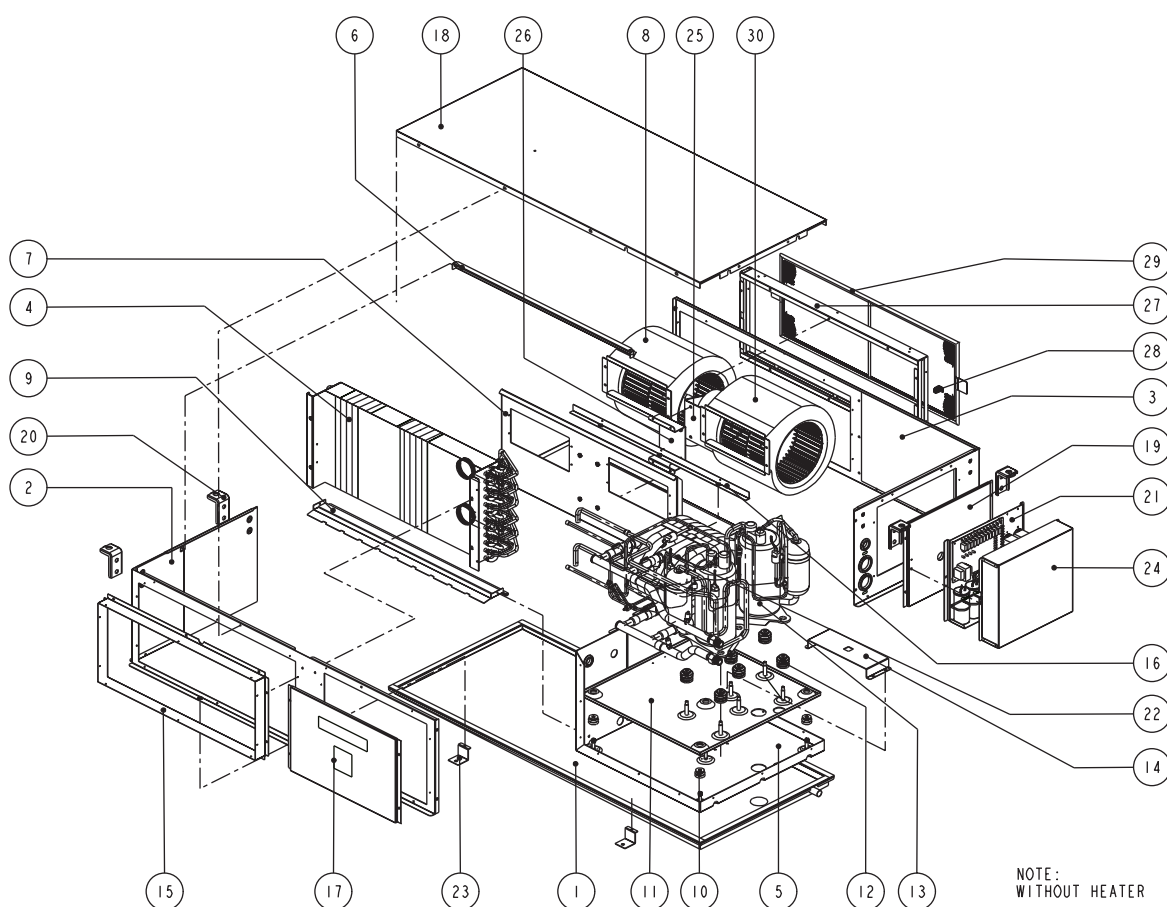
NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., DRAIN PAN	15	DUCT, FLANGE
2	ASSY., FRONT PANEL	16	ASSY., FAN DECK SUPPORT
3	ASSY., BACK PANEL	17	ASSY., FILTER FLANGE
4	ASSY., COIL	18	ASSY., SERVICE FRONT
5	ASSY., COMP. BASE LOWER	19	PANEL, TOP
6	PANEL, FAN DECK HANGER	20	ASSY., HANGING BRACKET
7	ASSY., FAN DECK	21	BRACKET, PACKING
8	RIGHT BLOWER	22	PANEL, SERVICE RIGHT
9	PANEL, WATER CONDENSATE GUIDE	23	ASSY., CONTROL BOX
10	GROMMET, RUBBER	24	MOTOR
11	ASSY., COMP. BASE UPPER	25	COVER, PCB MOUNTING
12	ASSY., UNIT TUBING	26	THERMISTER HOLDER
13	GROMMET RUBBER	27	AIR FILTER
14	COMPRESSOR	28	LEFT BLOWER

Model : MWH 020B



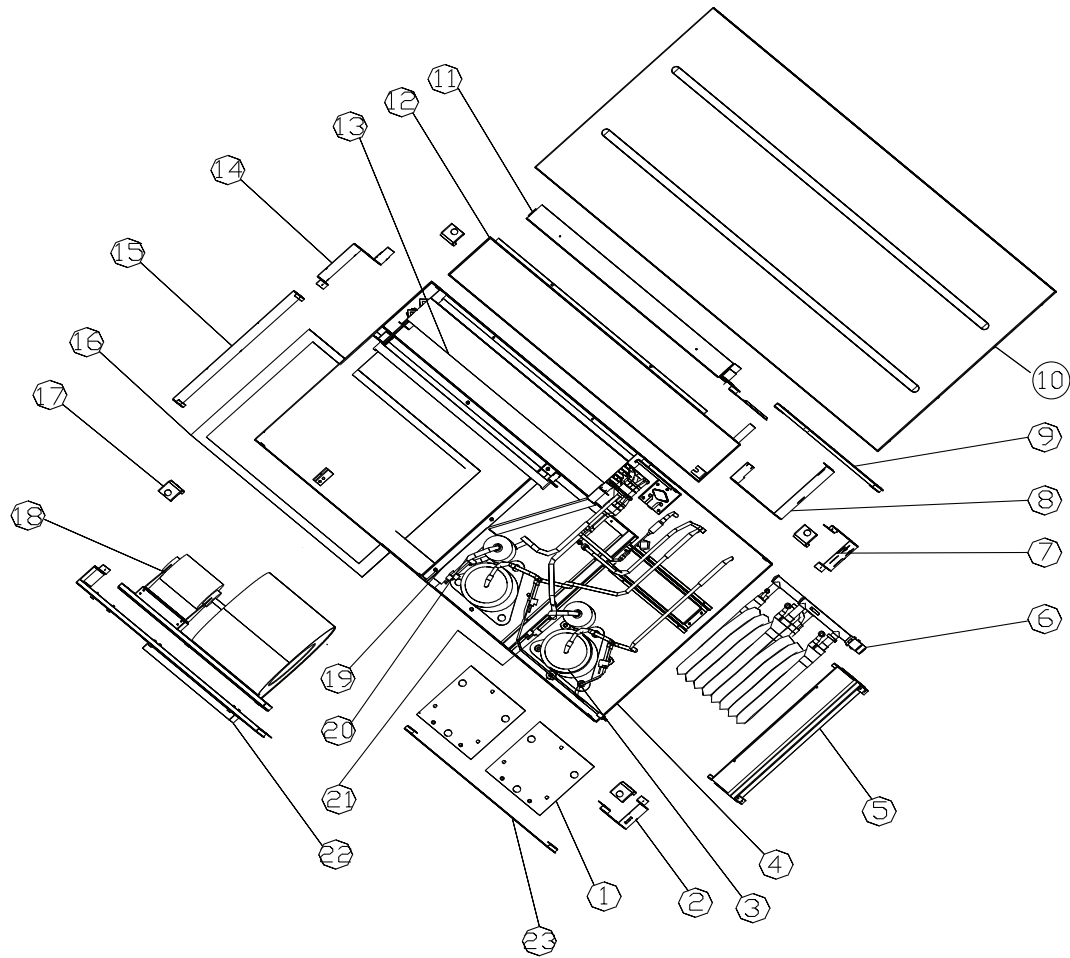
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1	ASSY., DRAIN PAN	16	PANEL, SERVICE FRONT
2	ASSY., FRONT PANEL	17	PANEL, TOP
3	ASSY., BACK PANEL	18	PANEL, SERVICE RIGHT
4	ASSY., COIL	19	ASSY., HANGING BRACKET
5	ASSY., COMP. BASE LOWER	20	ASSY., UNIT TUBING
6	PANEL, FAN DECK HANGER	21	COMPRESSOR
7	ASSY., FAN DECK	22	BRACKET, PACKING
8	RIGHT BLOWER	23	ASSY., CONTROL BOX
9	PANEL, WATER CONDENSATE GUIDE	24	COVER, PCB MOUNTING
10	GROMMET, RUBBER 7070817	25	MOTOR
11	ASSY., COMP. BASE UPPER	26	ASSY., MOTOR SUPPORT
12	GROMMET, RUBBER 7070823	27	THERMISTER HOLDER
13	FLANGE, DUCT	28	AIR FILTER
14	ASSY., FAN DECK SUPPORT	29	LEFT BLOWER
15	ASSY., FILTER FLANGE		

Model : MWH 025B



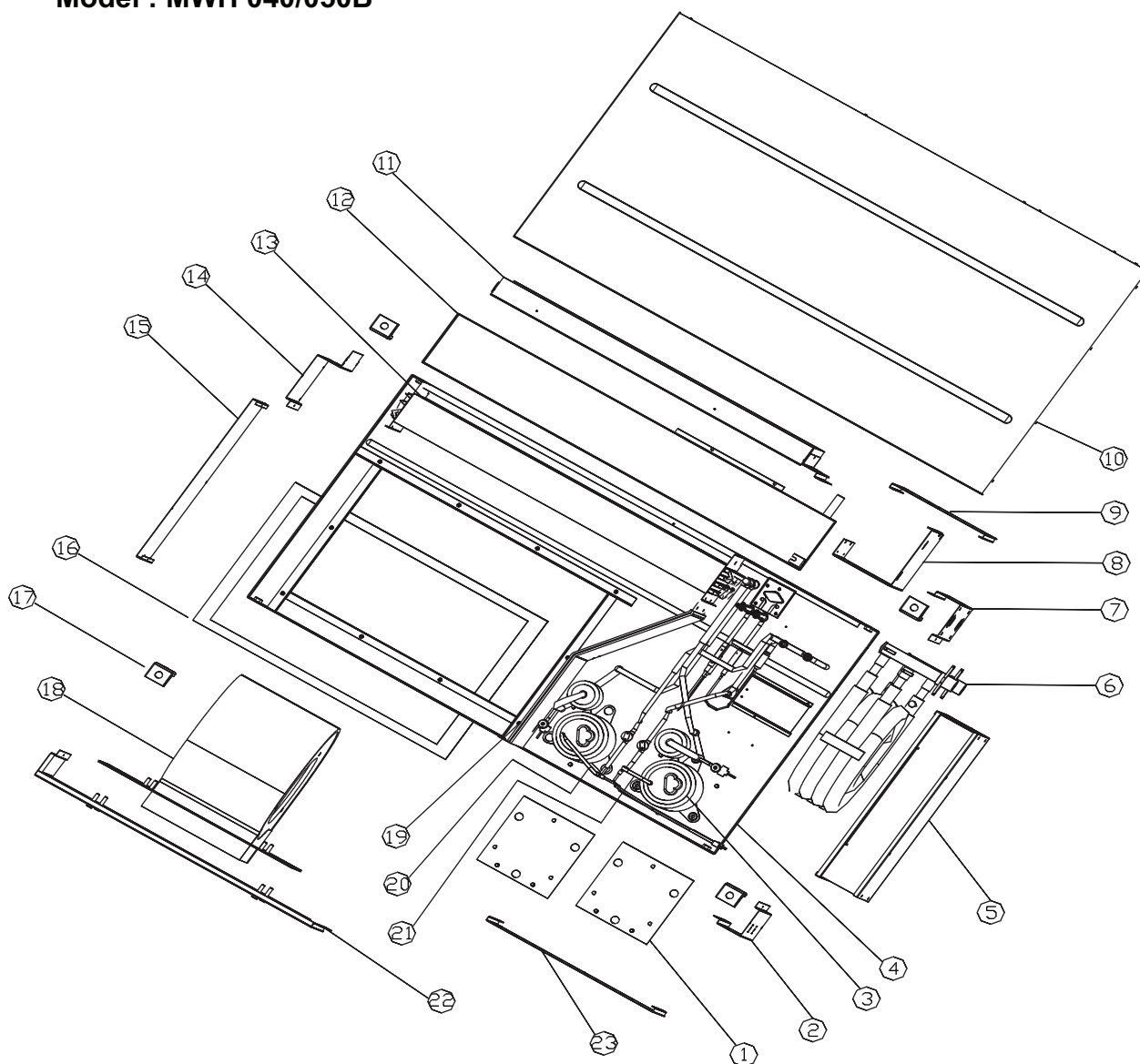
NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., DRAIN PAN	16	ASSY., FAN DECK SUPPORT
2	ASSY., FRONT PANEL	17	PANEL, SERVICE FRONT
3	ASSY., BACK PANEL	18	PANEL, TOP
4	ASSY., COIL	19	PANEL, SERVICE RIGHT
5	ASSY., COMP. BASE LOWER	20	ASSY., HANGING BRACKET
6	PANEL, FAN DECK HANGER	21	ASSY., CONTROL BOX
7	ASSY., FAN DECK	22	ASSY., UNIT TUBING
8	RIGHT BLOWER	23	BRACKET, PACKING
9	PANEL, WATER CONDENSATE GUIDE	24	COVER, PCB MOUNTING
10	GROMMET, RUBBER 7070817	25	MOTOR
11	ASSY., COMP. BASE UPPER	26	ASSY., MOTOR SUPPORT
12	GROMMET, RUBBER 7070823	27	FLANGE, FILTER
13	COMPRESSOR	28	THERMISTER HOLDER
14	CLAMP, TUBE IN TUBE	29	AIR FILTER
15	FLANGE, DUCT	30	LEFT BLOWER

Model : MWH 030B



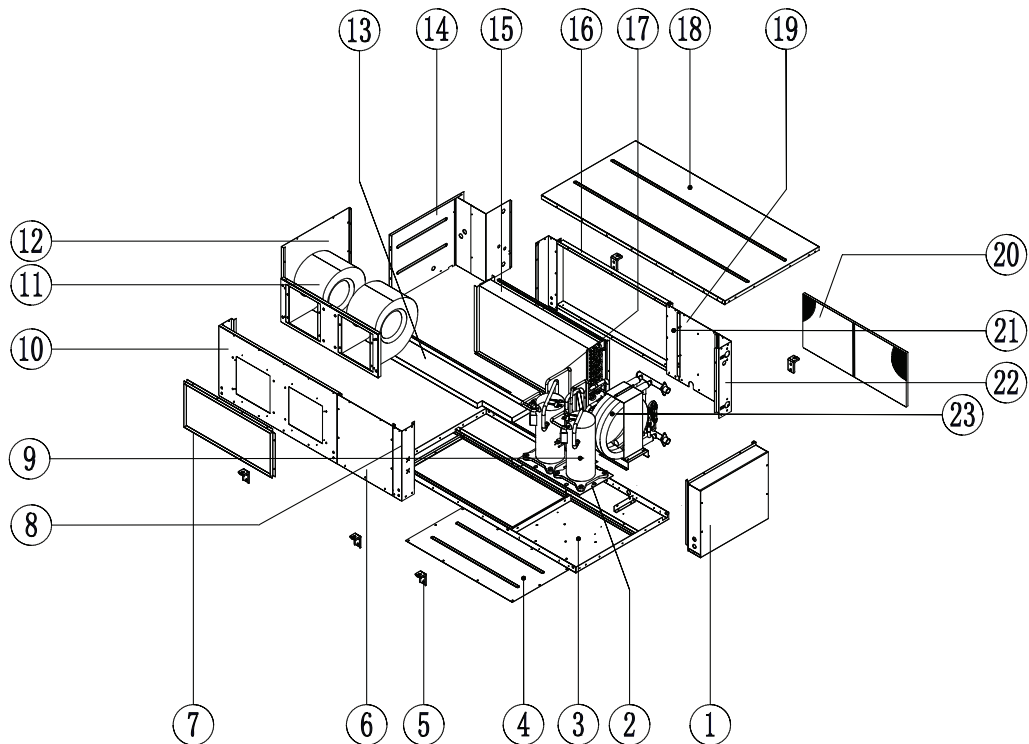
NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., COMPRESSOR SUPPORT PANEL	13	ASSY., COIL
2	ASSY., FRONT RIGHT PANEL	14	ASSY., BACK LEFT PANEL
3	COMPRESSOR	15	ASSY., MIDDLE LEFT PANEL
4	ASSY., BASE	16	ASSY., MAINTAIN PANEL
5	ASSY., CONTROL BOX	17	ASSY., WELD HOOK
6	ASSY., CONDENSER	18	ASSY., BLOWER & MOTOR
7	ASSY., BACK RIGHT PANEL	19	ASSY., MIDDLE PANEL
8	AIRPROOF PANEL	20	ASSY., TUBE UNIT 2
9	ASSY., BACK MIDDLE PANEL	21	ASSY., TUBE UNIT 1
10	ASSY., TOP PANEL	22	ASSY., FRONT PANEL
11	ASSY., FILTER & SUPPORT PANEL	23	ASSY., FRONT RIGHT PANEL
12	ASSY., DRAIN PANEL		

Model : MWH 040/050B



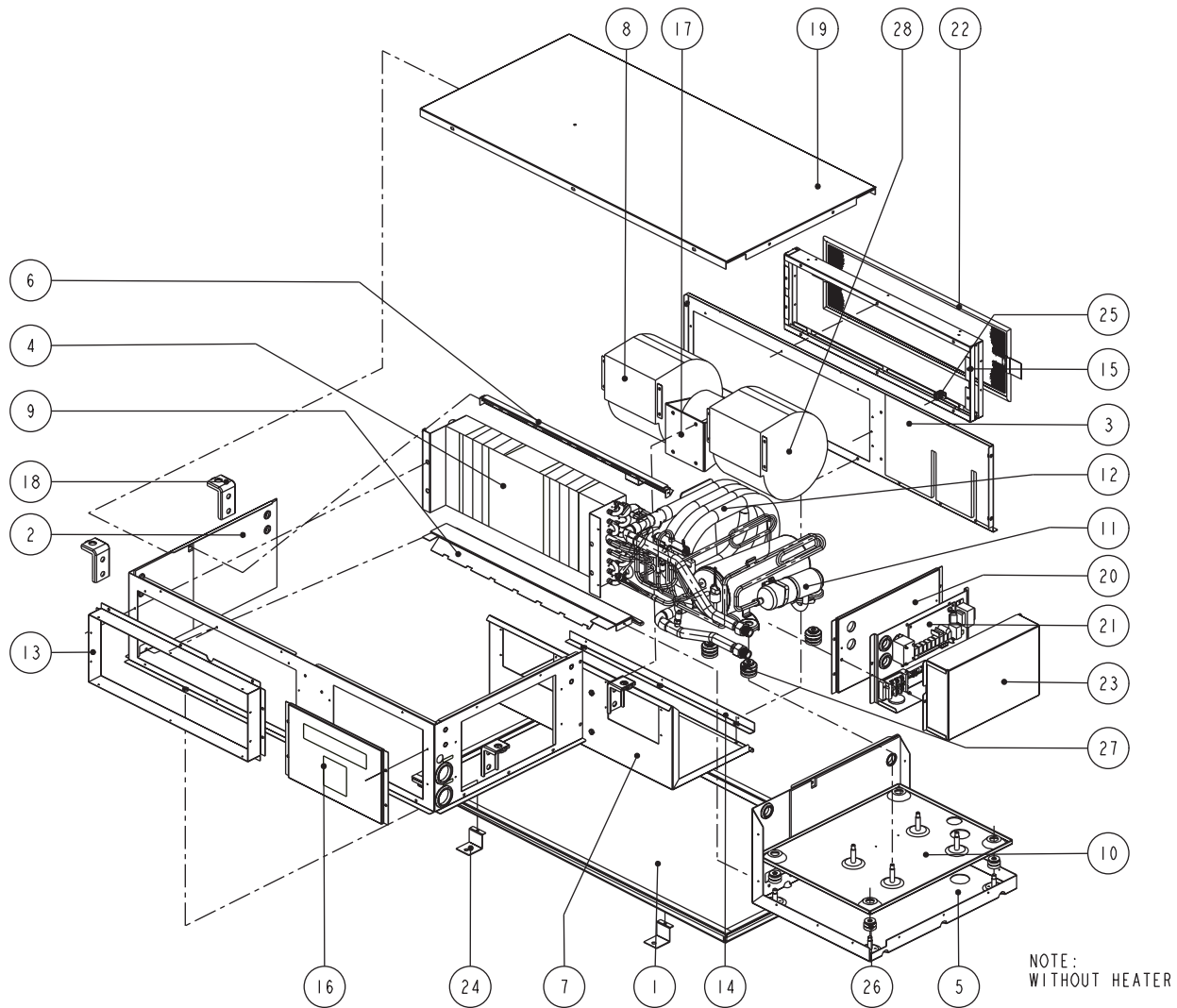
NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., COMPRESSOR SUPPORT PANEL	13	ASSY., COIL
2	ASSY., FRONT RIGHT PANEL	14	ASSY., BACK LEFT PANEL
3	COMPRESSOR	15	ASSY., MIDDLE LEFT PANEL
4	ASSY., BASE	16	ASSY., MAINTAIN PANEL
5	ASSY., CONTROL BOX	17	ASSY., WELD HOOK
6	ASSY., CONDENSER	18	ASSY., BLOWER & MOTOR
7	ASSY., BACK RIGHT PANEL	19	ASSY., MIDDLE PANEL
8	AIRPROOF PANEL	20	ASSY., TUBE UNIT 2
9	ASSY., BACK MIDDLE PANEL	21	ASSY., TUBE UNIT 1
10	ASSY., TOP PANEL	22	ASSY., FRONT PANEL
11	ASSY., FILTER & SUPPORT PANEL	23	ASSY., FRONT RIGHT PANEL
12	ASSY., DRAIN PANEL		

Model : MWH 060/070B



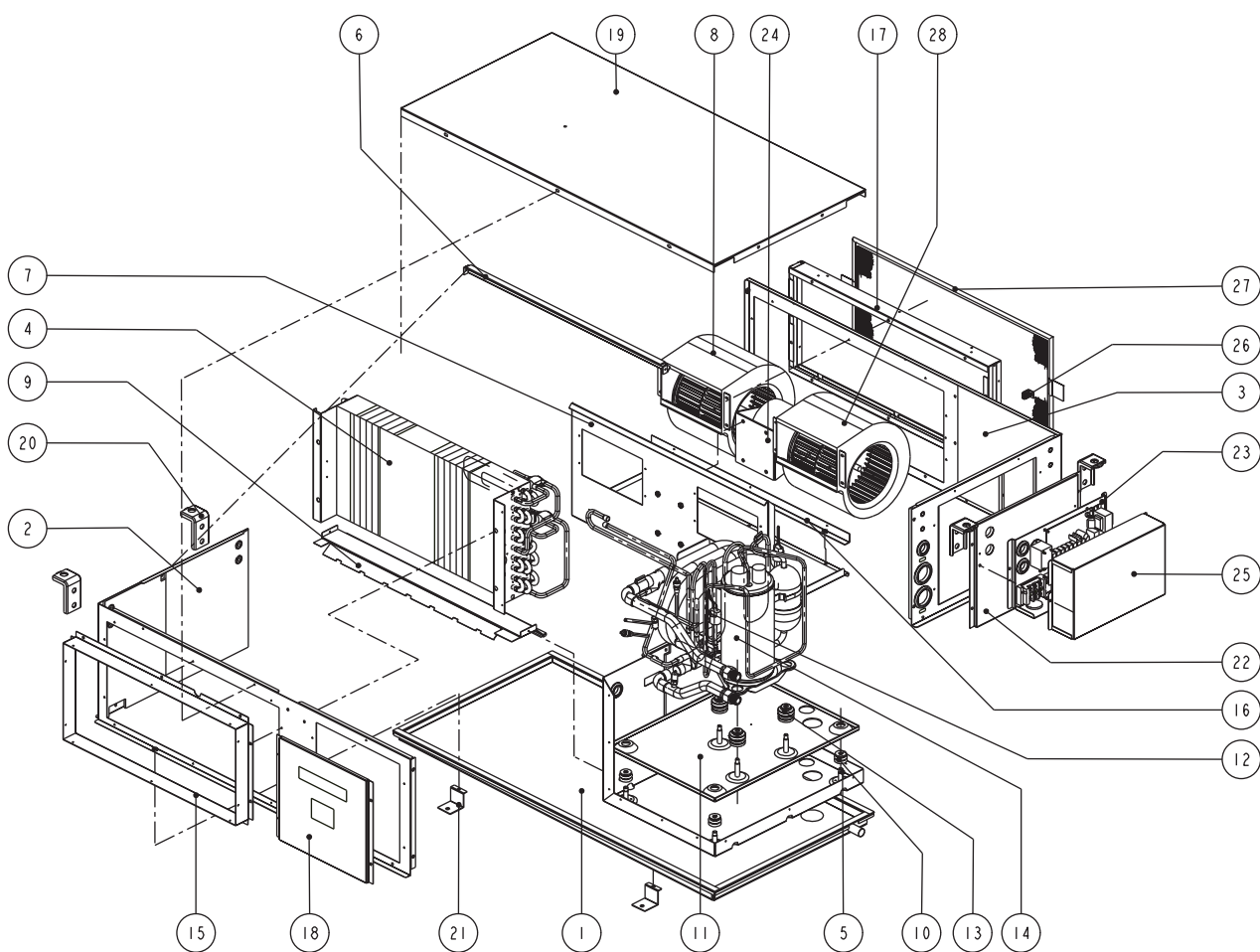
NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., CONTROL BOX ASSEMBLY	13	ASSY., DRAIN PANEL
2	ASSY., COMPRESSOR SUPPORT PANEL	14	ASSY., MIDDLE PANEL
3	ASSY., BASE PANEL	15	COIL ASSEMBLY
4	ASSY., BOTTOM CHECK PANEL	16	ASSY., FILTER SUPPORT PANEL TOP & BOTTOM
5	ASSY., WELD HOOK	17	TUBE (1 SUIT)
6	ASSY., FRONT CHECK PANEL	18	ASSY., TOP PANEL
7	ASSY., BLOWER FLANGE	19	ASSY., CHECK PANEL BACK
8	ASSY., SIDE PANEL RIGHT	20	FILTER
9	ASSY., COMPRESSOR	21	ASSY., SIDE PANEL BACK MIDDLE
10	ASSY., FRONT PANEL	22	ASSY., SIDE PANEL BACK RIGHT
11	ASSY., BLOWER	23	ASSY., CONDENSER
12	ASSY., CHECK PANEL LEFT		

R



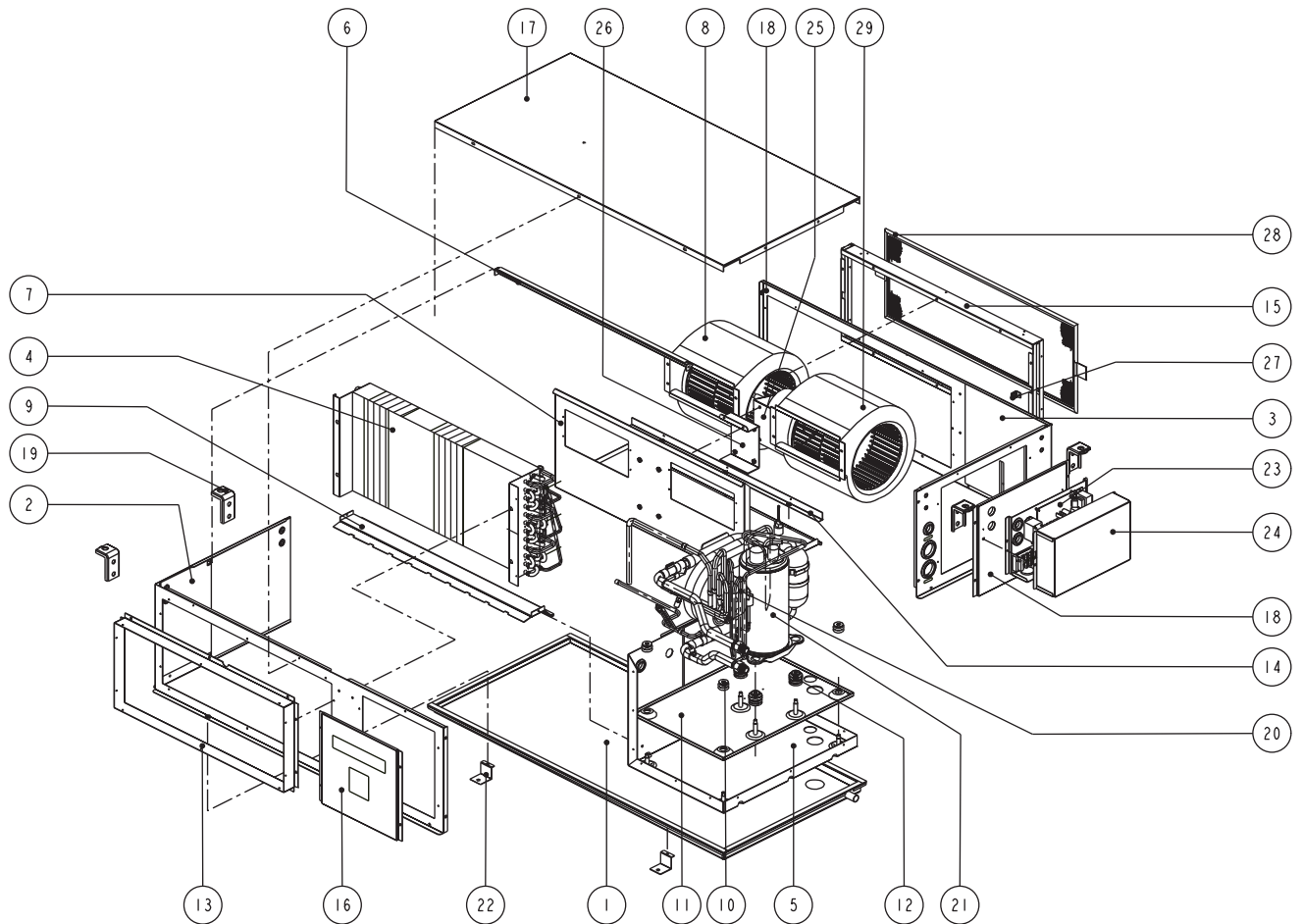
NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., DRAIN PAN	15	ASSY., FILTER FLANGE
2	ASSY., FRONT PANEL	16	PANEL, SERVICE FRONT
3	ASSY., PANEL BACK	17	MOTOR
4	ASSY., COIL	18	HANGING, BRACKET
5	ASSY., COMP. BASE LOWER	19	PANEL, TOP
6	PANEL, FAN DECK HANGER	20	PANEL, SERVICE RIGHT
7	ASSY., FAN DECK	21	ASSY., CONTROL BOX
8	RIGHT BLOWER	22	AIR FILTER
9	PANEL, WATER CONDENSATE GUIDE	23	COVER, PCB MOUNTING
10	ASSY., COMP. BASE UPPER	24	BRACKET, PACKING
11	COMPRESSOR	25	THERMISTER HOLDER
12	ASSY., TUBING	26	GROMMET, RUBBER 7070817
13	DUCT, FLANGE	27	GROMMET, RUBBER 7070815
14	ASSY., FAN DECK SUPPORT	28	LEFT BLOWER

Model : MWH 012/015BR



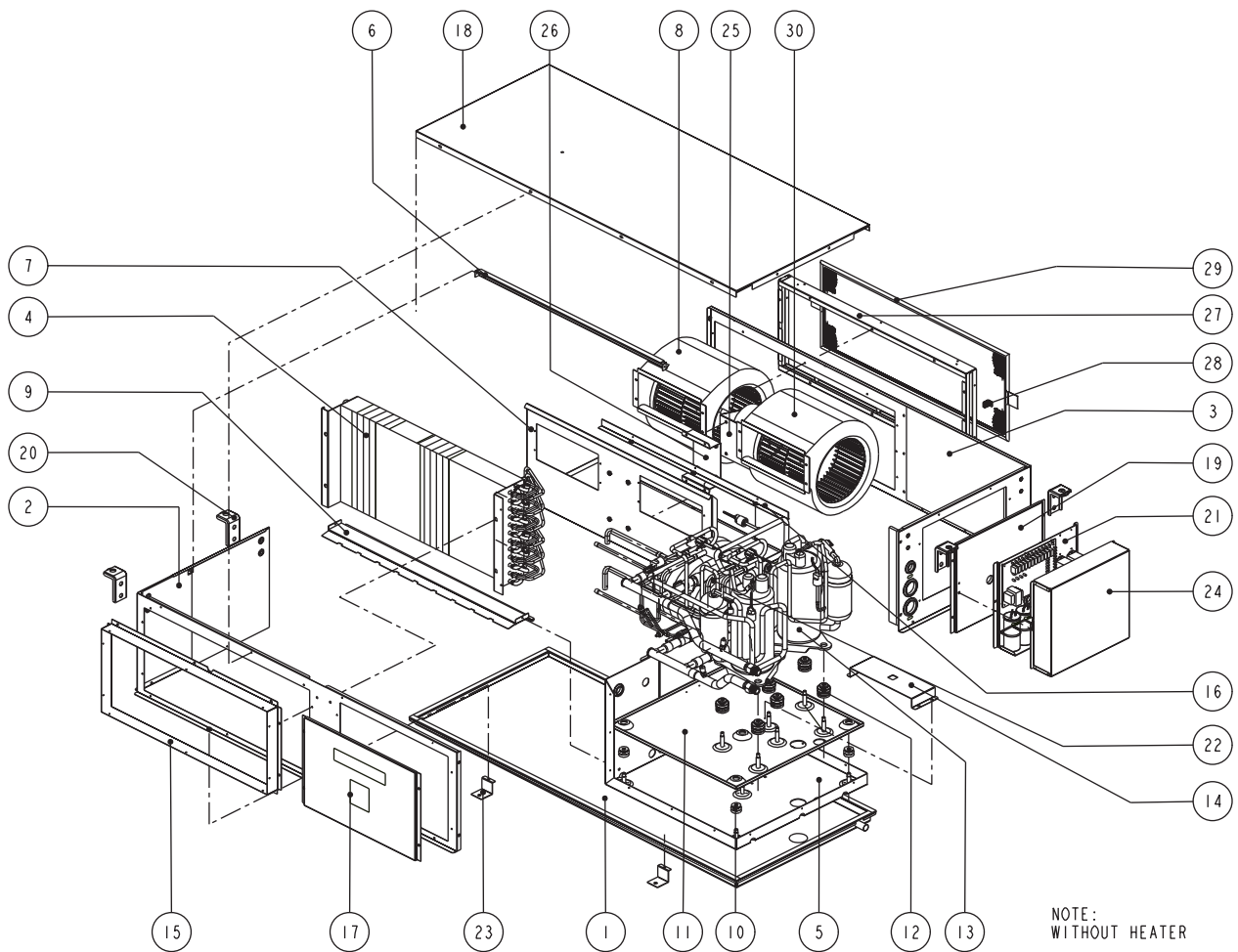
NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., DRAIN PAN	15	DUCT, FLANGE
2	ASSY., FRONT PANEL	16	ASSY., FAN DECK SUPPORT
3	ASSY., BACK PANEL	17	ASSY., FILTER FLANGE
4	ASSY., COIL	18	ASSY., SERVICE FRONT
5	ASSY., COMP. BASE LOWER	19	PANEL, TOP
6	PANEL, FAN DECK HANGER	20	ASSY., HANGING BRACKET
7	ASSY., FAN DECK	21	BRACKET, PACKING
8	RIGHT BLOWER	22	PANEL, SERVICE RIGHT
9	PANEL, WATER CONDENSATE GUIDE	23	ASSY., CONTROL BOX
10	GROMMET, RUBBER	24	MOTOR
11	ASSY., COMP. BASE UPPER	25	COVER, PCB MOUNTING
12	ASSY., UNIT TUBING	26	THERMISTER HOLDER
13	GROMMET RUBBER	27	AIR FILTER
14	COMPRESSOR	28	LEFT BLOWER

Model : MWH 020BR



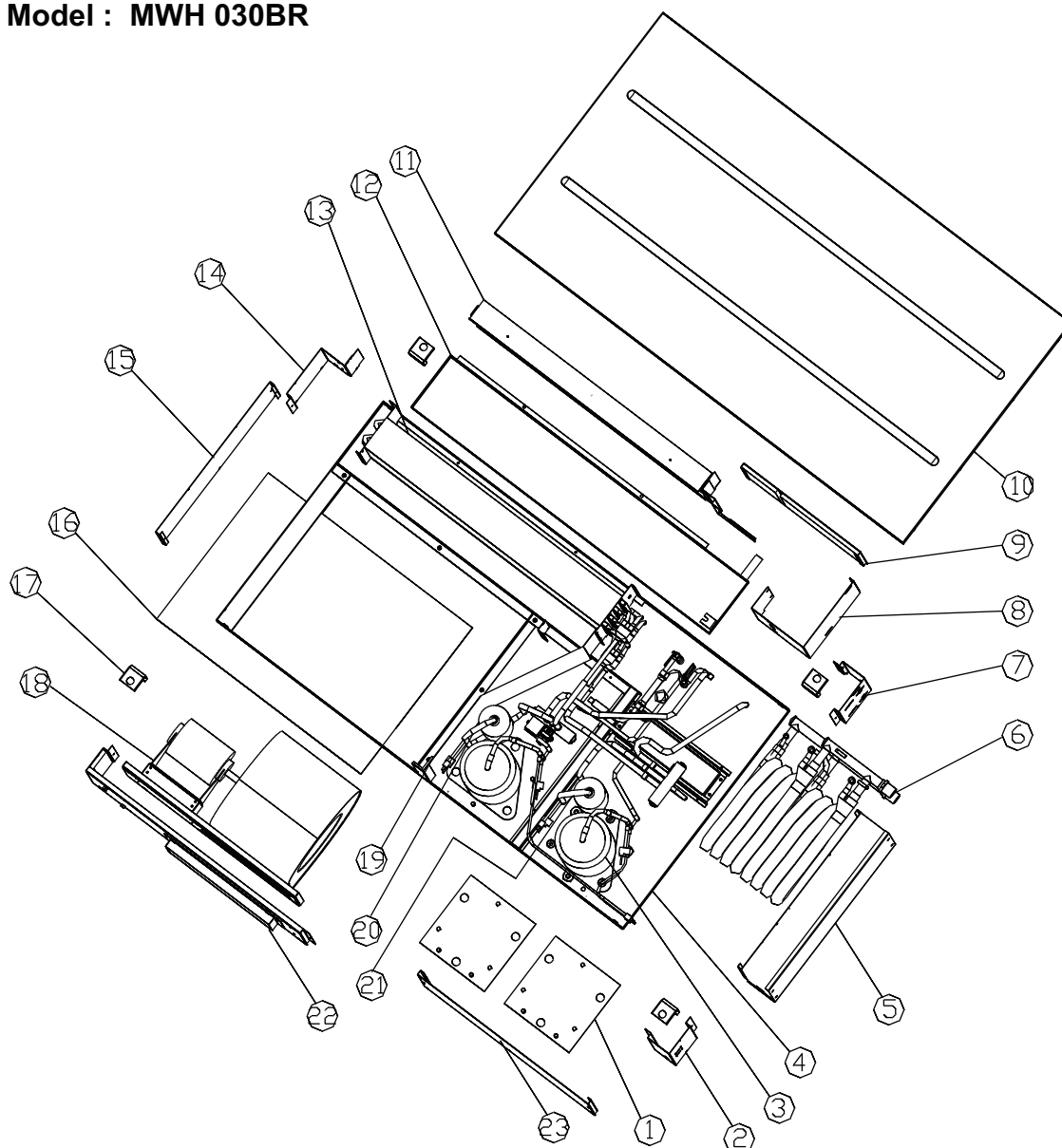
NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., DRAIN PAN	16	PANEL, SERVICE FRONT
2	ASSY., FRONT PANEL	17	PANEL, TOP
3	ASSY., BACK PANEL	18	PANEL, SERVICE RIGHT
4	ASSY., COIL	19	ASSY., HANGING BRACKET
5	ASSY., COMP. BASE LOWER	20	ASSY., UNIT TUBING
6	PANEL, FAN DECK HANGER	21	COMPRESSOR
7	ASSY., FAN DECK	22	BRACKET, PACKING
8	RIGHT BLOWER	23	ASSY., CONTROL BOX
9	PANEL, WATER CONDENSATE GUIDE	24	COVER, PCB MOUNTING
10	GROMMET, RUBBER 7070817	25	MOTOR
11	ASSY., COMP. BASE UPPER	26	ASSY., MOTOR SUPPORT
12	GROMMET, RUBBER 7070823	27	THERMISTER HOLDER
13	FLANGE, DUCT	28	AIR FILTER
14	ASSY., FAN DECK SUPPORT	29	LEFT BLOWER
15	ASSY., FILTER FLANGE		

Model : MWH 025BR



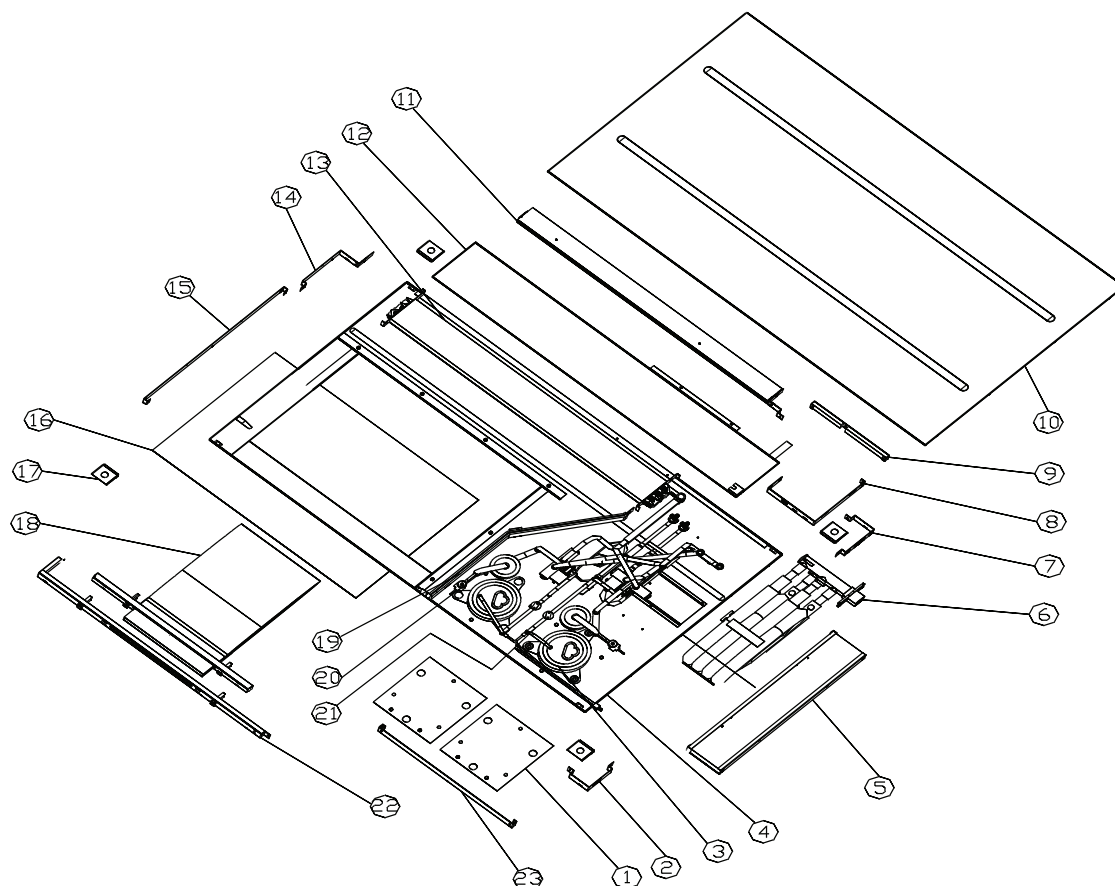
NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., DRAIN PAN	16	ASSY., FAN DECK SUPPORT
2	ASSY., FRONT PANEL	17	PANEL, SERVICE FRONT
3	ASSY., BACK PANEL	18	PANEL, TOP
4	ASSY., COIL	19	PANEL, SERVICE RIGHT
5	ASSY., COMP. BASE LOWER	20	ASSY., HANGING BRACKET
6	PANEL, FAN DECK HANGER	21	ASSY., CONTROL BOX
7	ASSY., FAN DECK	22	ASSY., UNIT TUBING
8	RIGHT BLOWER	23	BRACKET, PACKING
9	PANEL, WATER CONDENSATE GUIDE	24	COVER, PCB MOUNTING
10	GROMMET, RUBBER 7070817	25	MOTOR
11	ASSY., COMP. BASE UPPER	26	ASSY., MOTOR SUPPORT
12	GROMMET, RUBBER 7070823	27	FLANGE, FILTER
13	COMPRESSOR	28	THERMISTER HOLDER
14	CLAMP, TUBE IN TUBE	29	AIR FILTER
15	FLANGE, DUCT	30	LEFT BLOWER

Model : MWH 030BR



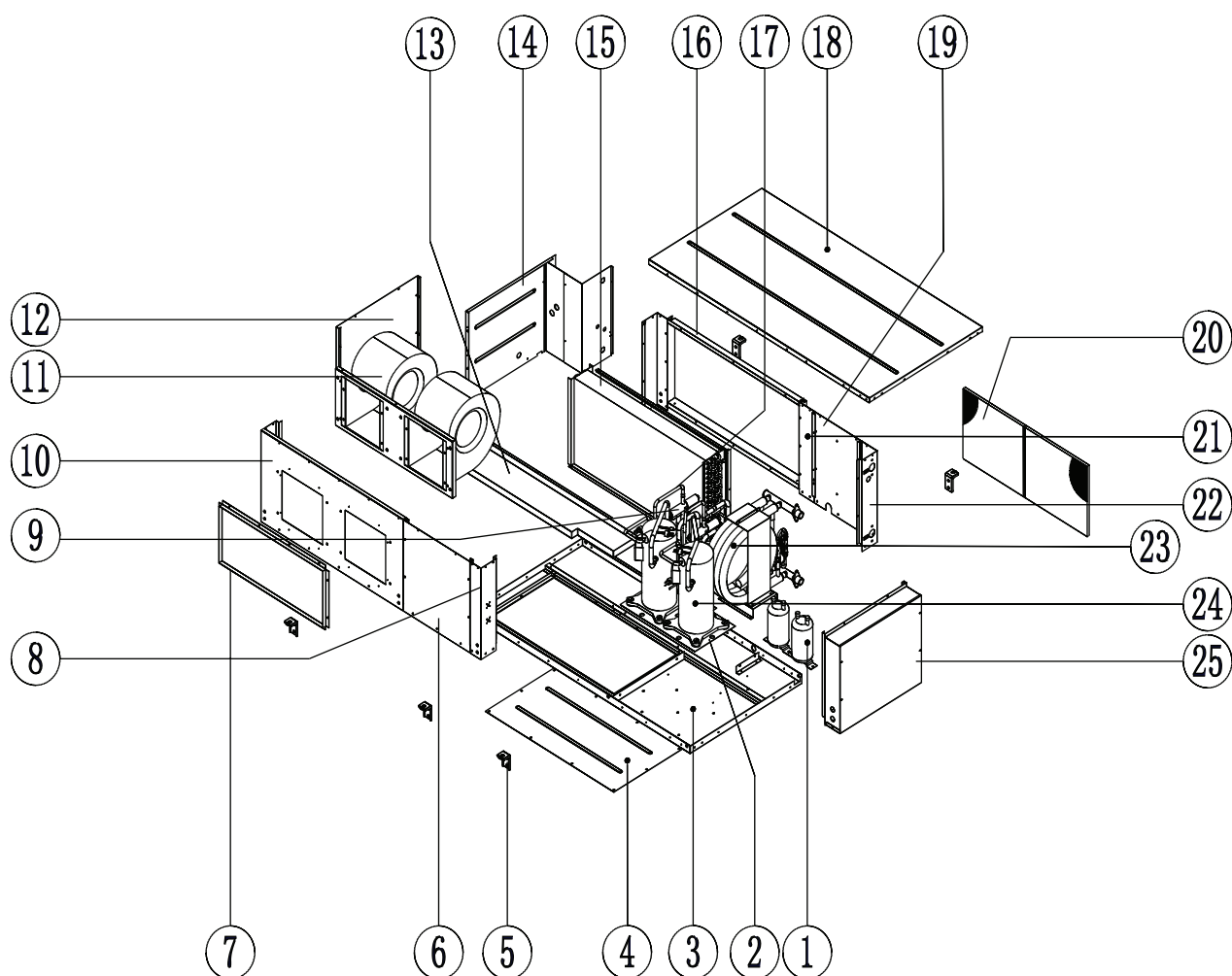
NO.	DESCRIPTION	No.	Description
1	ASSY., COMPRESSOR SUPPORT PANEL	13	ASSY., COIL
2	ASSY., FRONT RIGHT PANEL	14	ASSY., BACK LEFT PANEL
3	COMPRESSOR	15	ASSY., MIDDLE LEFT PANEL
4	ASSY., BASE	16	ASSY., MAINTAIN PANEL
5	ASSY., CONTROL BOX	17	ASSY., WELD HOOK
6	ASSY., CONDENSER	18	ASSY., BLOWER & MOTOR
7	ASSY., BACK RIGHT PANEL	19	ASSY., MIDDLE PANEL
8	AIRPROOF PANEL	20	ASSY., TUBE UNIT 2
9	ASSY., BACK MIDDLE PANEL	21	ASSY., TUBE UNIT 1
10	ASSY., TOP PANEL	22	ASSY., FRONT PANEL
11	ASSY., FILTER & SUPPORT PANEL	23	ASSY., FRONT RIGHT PANEL
12	ASSY., DRAIN PANEL		

Model : MWH 040/050BR



NO.	DESCRIPTION	NO.	DESCRIPTION
1	ASSY., COMPRESSOR SUPPORT PANEL	13	ASSY., COIL
2	ASSY., FRONT RIGHT PANEL	14	ASSY., BACK LEFT PANEL
3	COMPRESSOR	15	ASSY., MIDDLE LEFT PANEL
4	ASSY., BASE	16	ASSY., MAINTAIN PANEL
5	ASSY., CONTROL BOX	17	ASSY., WELD HOOK
6	ASSY., CONDENSER	18	ASSY., BLOWER & MOTOR
7	ASSY., BACK RIGHT PANEL	19	ASSY., MIDDLE PANEL
8	AIRPROOF PANEL	20	ASSY., TUBE UNIT 2
9	ASSY., BACK MIDDLE PANEL	21	ASSY., TUBE UNIT 1
10	ASSY., TOP PANEL	22	ASSY., FRONT PANEL
11	ASSY., FILTER & SUPPORT PANEL	23	ASSY., FRONT RIGHT PANEL
12	ASSY., DRAIN PANEL		

Model : MWH 060/070BR



NO.	DESCRIPTION	NO.	DESCRIPTION
1	ACCUMULATOR	14	ASSY., MIDDLE PANEL
2	ASSY., COMPRESSOR SUPPORT PANEL	15	COIL ASSEMBLY
3	ASSY., BASE PANEL	16	ASSY., FILTER SUPPORT PANEL TOP & BOTTOM
4	ASSY., BOTTOM CHECK PANEL	17	TUBE (1 SUIT)
5	ASSY., WELD HOOK	18	ASSY., TOP PANEL
6	ASSY., FRONT CHECK PANEL	19	ASSY., CHECK PANEL BACK
7	ASSY., BLOWER FLANGE	20	FILTER
8	ASSY., SIDE PANEL RIGHT	21	ASSY., SIDE PANEL BACK MIDDLE
9	4 WAY VALVE	22	ASSY., SIDE PANEL BACK RIGHT
10	ASSY., FRONT PANEL	23	ASSY., CONDENSER
11	ASSY., BLOWER	24	ASSY., COMPRESSOR
12	ASSY., CHECK PANEL LEFT	25	ASSY., CONTROL BOX
13	ASSY., DRAIN PANEL		

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This document contains the most current product information as of this printing. For the
most up-to-date product information, please go to www.mcquay.com.

